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=> fil reg
FILE 'REGISTRY' ENTERED AT 09:50:08 ON 17 JUL 2006

=> d his

     FILE 'HCAPLUS' ENTERED AT 08:10:39 ON 17 JUL 2006
L1             1 S US20040175650/PN
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 08:10:57 ON 17 JUL 2006
L2             2 S E1-E2
L3               STR
L4               STR
L5               SCR 1918 OR 1992
L6            42 SEA FILE=REGISTRY SSS SAM L3 AND L4 NOT L5
L7               STR L4
L8         13828 S L3 AND L4 NOT L5 FUL
L9             1 S L2 AND L8
                 SAV L8 LEE393A/A
L10           11 S L7 SAM  SUB=L8
L11          141 S L7 FUL  SUB=L8
L12              STR L7
L13            3 S L12 SAM  SUB=L8
L14           30 S L12 FUL  SUB=L8

     FILE 'HCAPLUS' ENTERED AT 09:13:51 ON 17 JUL 2006
L15           11 S L14
L16        14834 S L8
L17        14823 S L16 NOT L15
L18         1131 S L17(L)DEV/RL
L19          443 S L18 AND PHOTOG?/SC
L20          247 S L19 AND (1840-1998)/PRY,AY,PY
L21            0 S L20 AND (WAVEGUIDE? OR WAVE(A)GUIDE?)
L22           80 S L17 AND (WAVEGUIDE? OR WAVE(A)GUIDE?)
L23           11 S L22 AND PHOTOG?/SC
L24           40 S L22 AND DEV/RL
L25           11 S L24 AND PHOTOG?/SC,SX
L26           46 S L23-L25
L27           15 S L26 AND (1840-1998)/PRY,AY,PY


=> d que l15
L3               STR
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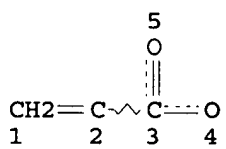


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NODE ATTRIBUTES:
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   5

STEREO ATTRIBUTES: NONE
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L4              STR

Cb~Ak~Cb
 1   2   3


NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY  UNS  AT   1
GGCAT   IS MCY  UNS  AT   3
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   3

STEREO ATTRIBUTES: NONE
L5              SCR 1918 OR 1992
L8         13828 SEA FILE=REGISTRY SSS FUL L3 AND L4 NOT L5
L12             STR

Cb~Ak~Cb~G1~Cb       Ak~O
 1   2   3   4   5       @6  @7


VAR G1=6-3 7-5/7-3 6-5
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CONNECT IS E2  RC AT   6
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GGCAT   IS MCY  UNS  AT   3
GGCAT   IS MCY  UNS  AT   5
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   7

STEREO ATTRIBUTES: NONE
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L15           11 SEA FILE=HCAPLUS ABB=ON  L14


=> fil hcap
FILE 'HCAPLUS' ENTERED AT 09:50:21 ON 17 JUL 2006

=> d l15 1-11 ibib abs hitstr hitind

L15  ANSWER 1 OF 11  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:168367  HCAPLUS
DOCUMENT NUMBER:          144:222558
TITLE:                    Crosslinkable radiation-sensitive compositions
                          for forming hard masks suitable for precise
                          fine etching of electronic device substrates
INVENTOR(S):              Sugita, Hikaru; Tanaka, Masato; Konno, Keiji;
                          Nomura, Nakaatsu; Shimokawa, Tsutomu
PATENT ASSIGNEE(S):       JSR Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 24 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
```

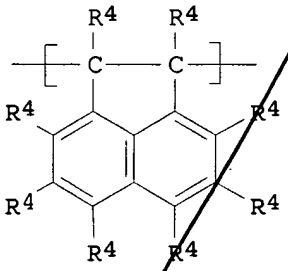
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006053404	A2	20060223	JP 2004-235695	20040813

PRIORITY APPLN. INFO.: JP 2004-235695 20040813

GI

Q =



AB The compns. contain photoacid generators, solvents, and copolymers having (A) epoxy-bearing structural repeating units expressed by [C(R1)(CO2CR2R2R3)CH2] [R1-2 = H, monovalent organic group free from epoxy group; R3 = monovalent organic group bearing epoxy group], and (B) acenaphthylene structural repeating units expressed by Q (R4 = H, monovalent organic group free from epoxy group). The compns. may further contain crosslinking agents. Also claimed are hard masks made from the compns. Hard film patterns, formed by radiation hardening of the compns., are used as hard masks for etching substrates (made of silicon, aluminized silicon, etc.) underlying the hard masks, and the hard masks can be easily released off the substrates by low-temperature heating.

IT **875927-47-2P**
(hard masks; radiation-crosslinkable composition containing acenaphthylene-epoxy acrylate copolymer for forming hard masks)

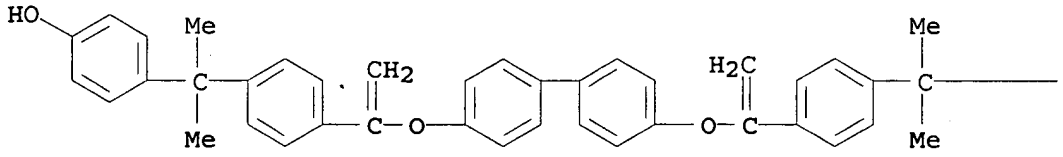
RN 875927-47-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1-methyl-1-(6-methyl-7-oxabicyclo[4.1.0]hept-3-yl)ethyl ester, polymer with acenaphthylene and 4,4'-[[1,1'-biphenyl]-4,4'-diylbis[oxyethenylidene-4,1-phenylene(1-methylethylidene)]]bis[phenol] (9CI) (CA INDEX NAME)

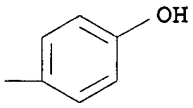
CM 1

CRN 875927-46-1
CMF C46 H42 O4

PAGE 1-A

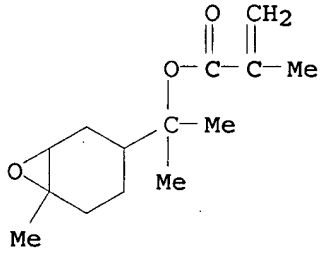


PAGE 1-B



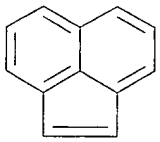
CM 2

CRN 354801-90-4
CMF C14 H22 O3



CM 3

CRN 208-96-8
CMF C12 H8



CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38, 76

IT **875927-47-2P**
(hard masks; radiation-crosslinkable composition containing acenaphthylene-epoxy acrylate copolymer for forming hard masks)

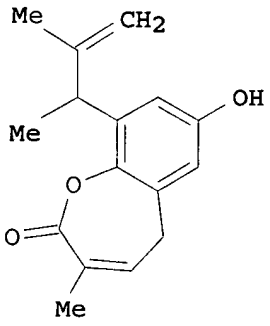
L15 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1084705 HCAPLUS
DOCUMENT NUMBER: 144:6609

TITLE: Synthesis of the floresolide B hydroquinone lactone core using ring-closing metathesis

AUTHOR(S): Briggs, Timothy F.; Dudley, Gregory B.
CORPORATE SOURCE: Department of Chemistry and Biochemistry, Florida State University, Tallahassee, FL, 32306, USA

SOURCE: Tetrahedron Letters (2005), 46(45), 7793-7796
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 144:6609

GI



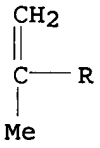
I

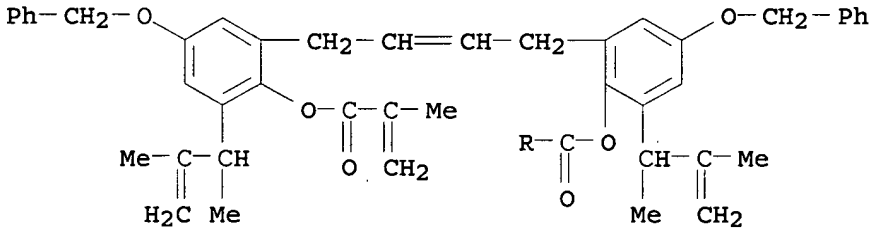
AB The hydroquinone lactone core I of the floresolides was synthesized through a ring-closing metathesis (RCM) approach. Optimal RCM efficiency was obtained at higher reaction concentration An unexpected Lewis acid-promoted rearrangement of the hydroquinone and other observations relevant to on-going total synthesis efforts are discussed.

IT **869953-71-9P**
(synthesis of floresolide B hydroquinone lactone core using ring-closing metathesis)

RN 869953-71-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-butene-1,4-diylbis[6-(1,2-dimethyl-2-propenyl)-4-(phenylmethoxy)-2,1-phenylene] ester (9CI) (CA INDEX NAME)





CC 26-9 (Biomolecules and Their Synthetic Analogs)
IT 869953-67-3P **869953-71-9P**
(synthesis of floresolide B hydroquinone lactone core using ring-closing metathesis)
REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1074617 HCAPLUS
DOCUMENT NUMBER: 143:336298
TITLE: Negatively working polymerizable composition and image-recording material using it
INVENTOR(S): Taguchi, Takanori; Fujimaki, Kazuhiro
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 90 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005274625	A2	20051006	JP 2004-83695	2004 0322
PRIORITY APPLN. INFO.:			JP 2004-83695	2004 0322

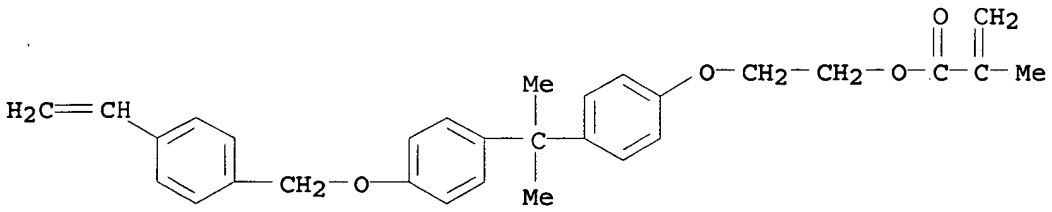
AB The composition contains (A) a compound having ≥1 partial structure represented by (I) R1R2C:CR3(COX-) and ≥1 partial structure represented by (II) R4R5C:CR6(A-) [R1-6 = 1-valent substitute composed of H and nonmetal atom; X = O, NR7 (R7 = 1-valent substitute composed of H and nonmetal atom); A = aromatic group, heterocyclic ring] and (B) radical polymerization initiator. The claimed recording material has a recording layer containing the composition The composition has high sensitivity and storage stability, and the recording material has high printability. The composition is especially

useful for lithog. printing plates.

IT **865285-11-6**
(neg. working polymerizable composition with high sensitivity and storage stability for image-recording material with high printability)

RN 865285-11-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-[4-[1-[4-[(4-ethenylphenyl)methoxy]phenyl]-1-methylethyl]phenoxy]ethyl ester (9CI) (CA INDEX NAME)



IC ICM G03F007-027
ICS C08F220-10; G03F007-00; G03F007-004; G03H001-02

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 56552-13-7 116237-20-8 865285-07-0 865285-08-1 865285-09-2
865285-10-5 **865285-11-6** 865285-12-7 865285-13-8
865285-14-9 865285-15-0 865285-16-1 865285-17-2
865285-18-3 865285-19-4 865285-20-7
(neg. working polymerizable composition with high sensitivity and storage stability for image-recording material with high printability)

L15 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:727478 HCAPLUS
DOCUMENT NUMBER: 137:270178
TITLE: Production method of optical waveguide coupler with oligomer
INVENTOR(S): Haga, Yoshimasa; Imamura, Saburo; Tomaru, Akira; Hikita, Makoto; Hashimoto, Kazuko; Yamauchi, Atsushi; Sakuma, Ayako; Michikgchi, Masayuki; Tomiyoshi, Chie
PATENT ASSIGNEE(S): NTT Advanced Technology Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002277662	A2	20020925	JP 2001-72920	2001 0314

PRIORITY APPLN. INFO.: JP 2001-72920 2001 0314

AB The invention refers to a production method of an optical waveguide

coupler using a reactive oligomer with easy pattern formation, heat resistance and resistance to moisture, small birefringence, and superior processability to form thick cores or cores with different diams. on the same waveguide for simple production of a easily connected coupler.

IT **461669-22-7**
(production method of optical waveguide coupler)

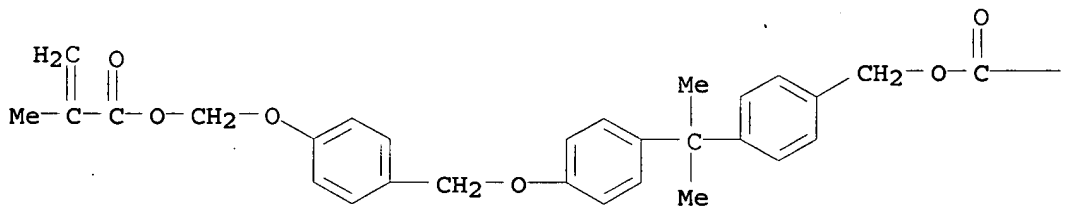
RN 461669-22-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, [4-[1-methyl-1-[4-[[4-[[(2-methyl-1-oxo-2-propenyl)oxy]methoxy]phenyl]methoxy]phenyl]ethyl]phenyl]methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 461669-21-6
CMF C32 H34 O6

PAGE 1-A



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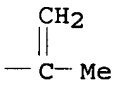


IC ICM G02B006-13
ICS C08F020-20; C08G059-02; C08G073-10; C08G077-04; G02B006-12

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT 159254-42-9 220341-23-1 220341-27-5 **461669-22-7**
(production method of optical waveguide coupler)

L15 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:332605 HCAPLUS
DOCUMENT NUMBER: 136:348314
TITLE: Photoresist polymers composition comprising bisphenol derivs. for UV photolithography
INVENTOR(S): Lee, Geun Su; Jung, Jae Chang; Jung, Min Ho; Baik, Ki Ho
PATENT ASSIGNEE(S): S. Korea
SOURCE: U.S. Pat. Appl. Publ., 20 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

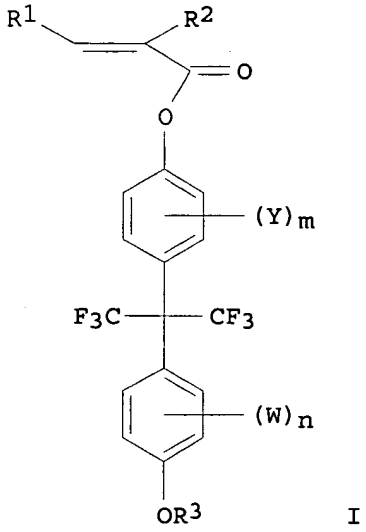
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2002051940	A1	20020502	US 2001-973630	2001 1009
US 6627383	B2	20030930		
KR 2002032025	A	20020503	KR 2000-62882	2000 1025
JP 2002173509	A2	20020621	JP 2001-278245	2001 0913

PRIORITY APPLN. INFO.: KR 2000-62882 A 2000 1025

OTHER SOURCE(S): MARPAT 136:348314

GI



I

AB The present invention relates to photoresist monomers of following formula I (R1,2 = H, C1-5 alkyl, halogen; R3 = acid labile protecting group; Y, W = H, halogen, NO2, CN; m,n = 0-4), photoresist polymers, and photoresist compns. containing the same. The photoresist composition has excellent etching resistance, heat resistance and adhesiveness, and is developable in aqueous tetramethylammonium hydroxide (TMAH) solution The photoresist composition has low light absorbance at the wavelength of 193 nm, 157 nm and 13 nm, and thus is suitable for a photolithog. process using UV light sources such as VUV (157 nm) and EUV (13 nm) in fabricating a minute circuit for a high integration semiconductor device.

IT **418761-63-4P 418761-64-5P 418761-65-6P 418761-68-9P**
(photoresist polymers composition comprising bisphenol derivs. for UV photolithog.)

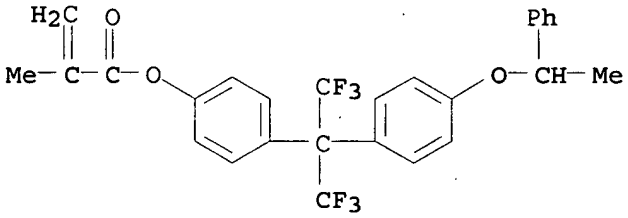
RN 418761-63-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 4-[2,2,2-trifluoro-1-(4-

hydroxyphenyl)-1-(trifluoromethyl)ethyl]phenyl ester, polymer with 1-ethenyl-4-fluorobenzene and 4-[2,2,2-trifluoro-1-[4-(1-phenylethoxy)phenyl]-1-(trifluoromethyl)ethyl]phenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

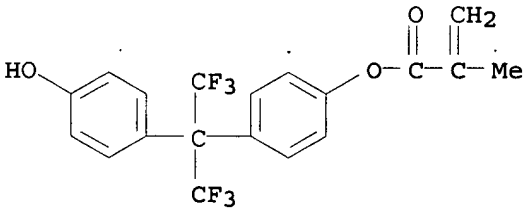
CM 1

CRN 418761-50-9
CMF C27 H22 F6 O3



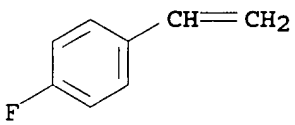
CM 2

CRN 418761-45-2
CMF C19 H14 F6 O3



CM 3

CRN 405-99-2
CMF C8 H7 F



RN 418761-64-5 HCAPLUS
CN 2-Propenoic acid, 4-[2,2,2-trifluoro-1-(4-hydroxyphenyl)-1-(trifluoromethyl)ethyl]phenyl ester, polymer with 3-ethenyl-1,2,4,5-tetrafluorobenzene and 4-[2,2,2-trifluoro-1-[4-(1-phenylethoxy)phenyl]-1-(trifluoromethyl)ethyl]phenyl 2-propenoate (9CI) (CA INDEX NAME)

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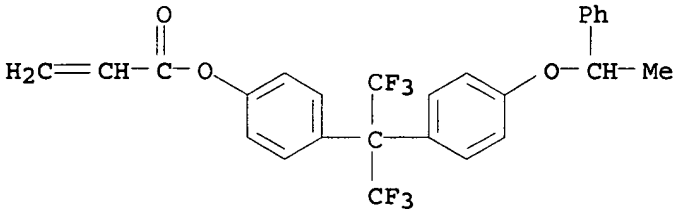
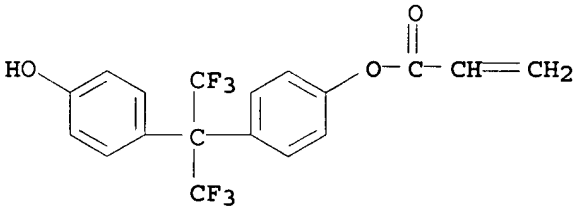
CRN 418761-53-2
CMF C26 H20 F6 O3



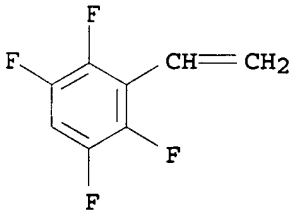
CM 2

CRN 418761-46-3
CMF C18 H12 F6 O3



CM 3

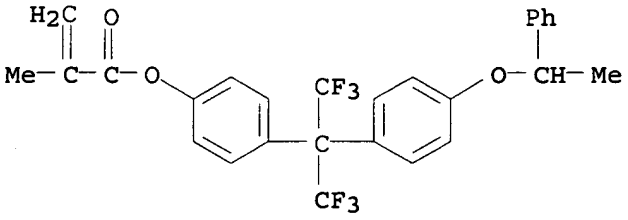
CRN 106875-92-7
CMF C8 H4 F4



RN 418761-65-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 4-[2,2,2-trifluoro-1-(4-hydroxyphenyl)-1-(trifluoromethyl)ethyl]phenyl ester, polymer with 4-[2,2,2-trifluoro-1-[4-(1-phenylethoxy)phenyl]-1-(trifluoromethyl)ethyl]phenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

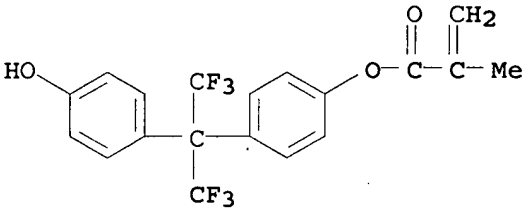
CM 1

CRN 418761-50-9
CMF C27 H22 F6 O3



CM 2

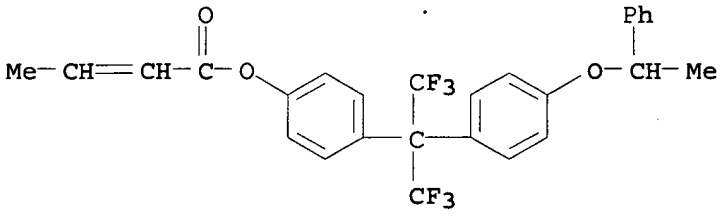
CRN 418761-45-2
CMF C19 H14 F6 O3



RN 418761-68-9 HCAPLUS
CN 2-Butenoic acid, 4-[2,2,2-trifluoro-1-[4-(1-phenylethoxy)phenyl]-1-(trifluoromethyl)ethyl]phenyl ester, polymer with 4-[2,2,2-trifluoro-1-(4-hydroxyphenyl)-1-(trifluoromethyl)ethyl]phenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

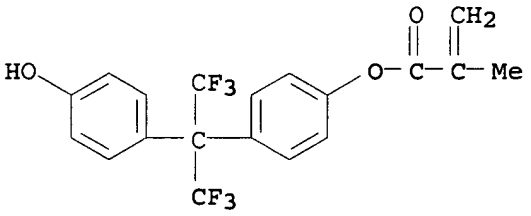
CM 1

CRN 418761-57-6
CMF C27 H22 F6 O3

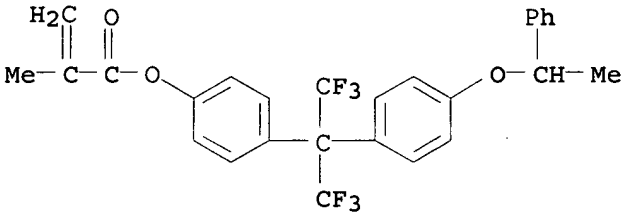


CM 2

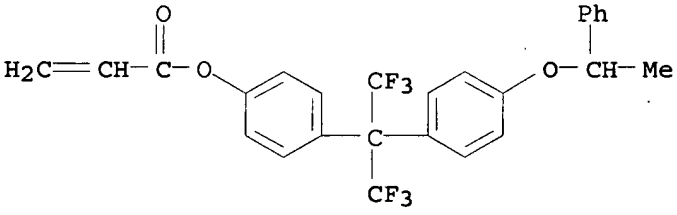
CRN 418761-45-2
CMF C19 H14 F6 O3



IT **418761-50-9P 418761-53-2P**
(preparation of photoresist polymer composition comprising bisphenol derivs.)
RN 418761-50-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 4-[2,2,2-trifluoro-1-[4-(1-phenylethoxy)phenyl]-1-(trifluoromethyl)ethyl]phenyl ester (9CI) (CA INDEX NAME)



RN 418761-53-2 HCAPLUS
CN 2-Propenoic acid, 4-[2,2,2-trifluoro-1-[4-(1-phenylethoxy)phenyl]-1-(trifluoromethyl)ethyl]phenyl ester (9CI) (CA INDEX NAME)



IC ICM G03F007-038
ICS G03F007-20; G03F007-38; G03F007-40; G03F007-26
INCL 430270100; X43-033.0; X43-031.1; X43-096.7; X43-029.6
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 38
IT 418761-59-8P 418761-61-2P **418761-63-4P**
418761-64-5P 418761-65-6P 418761-66-7P
418761-67-8P **418761-68-9P**
(photoresist polymers composition comprising bisphenol derivs. for UV photolithog.)
IT 418761-45-2P 418761-46-3P 418761-47-4P 418761-48-5P
418761-50-9P 418761-51-0P **418761-53-2P**
418761-55-4P 418761-57-6P
(preparation of photoresist polymer composition comprising bisphenol

derivs.)

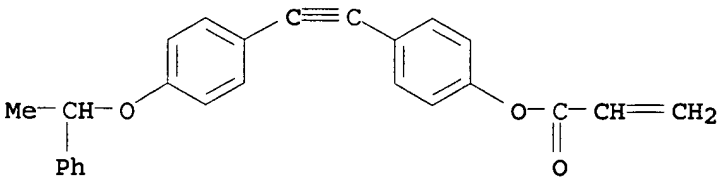
L15 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:93854 HCAPLUS
DOCUMENT NUMBER: 126:111140
TITLE: Chiral nematic liquid-crystal composition with good storage stability
INVENTOR(S): Takatsu, Haruyoshi; Hasebe, Hiroshi; Takeuchi, Kyobumi
PATENT ASSIGNEE(S): Dainippon Ink & Chemicals, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08245960	A2	19960924	JP 1996-2233	19960110
PRIORITY APPLN. INFO.:			JP 1996-2233 A	19960110
			JP 1995-3999	19951130

OTHER SOURCE(S): MARPAT 126:111140
AB The composition, with intrinsic pitch 0.5-60 μm and chiral nematic-isotropic transition temperature ≥70°, monofunctional polymerizable chiral monomer comprising an acrylic acid ester of a cyclic alc., phenol, or an aromatic hydroxy compound having optically active groups and ≥2 6-membered rings and a nonpolymerizable nematic liquid crystal. The composition is useful for display devices. The composition showed good storage stability.
IT **185452-79-3 185831-96-3 185832-06-8**
(chiral nematic liquid-crystal composition containing chiral aromatic acrylate monomer with good storage stability)
RN 185452-79-3 HCAPLUS
CN 2-Propenoic acid, 4-[[4-(1-phenylethoxy)phenyl]ethynyl]phenyl ester, mixt. with [trans(trans)]-5-[4'-(3-butenyl)[1,1'-bicyclohexyl]-4-yl]-1,2,3-trifluorobenzene, [trans(trans)]-5-(4'-ethenyl[1,1'-bicyclohexyl]-4-yl)-1,2,3-trifluorobenzene, [trans(trans)]-1,2,3-trifluoro-5-(4'-propyl[1,1'-bicyclohexyl]-4-yl)benzene and [trans(trans)]-1,2,3-trifluoro-5-[4-(4'-propyl[1,1'-bicyclohexyl]-4-yl)butyl]benzene (9CI) (CA INDEX NAME)

CM 1

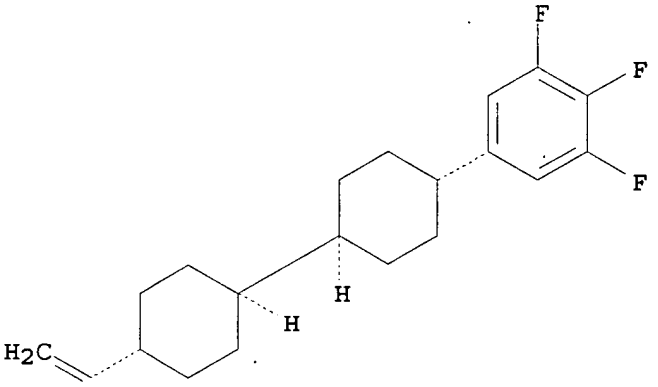
CRN 185452-78-2
CMF C25 H20 O3



CM 2

CRN 160910-17-8
CMF C20 H25 F3

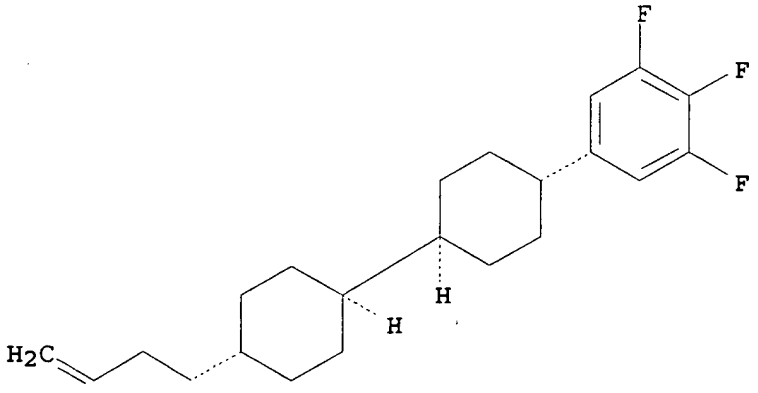
Relative stereochemistry.



CM 3

CRN 159586-97-7
CMF C22 H29 F3

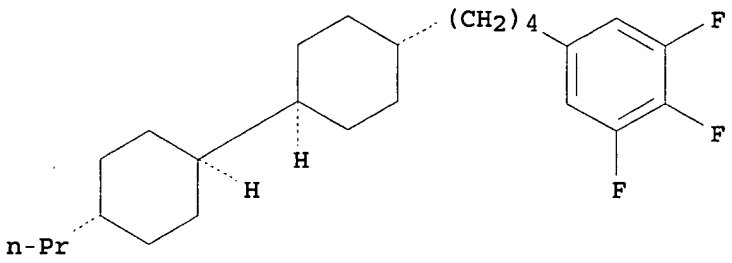
Relative stereochemistry.



CM 4

CRN 158521-22-3
CMF C25 H37 F3

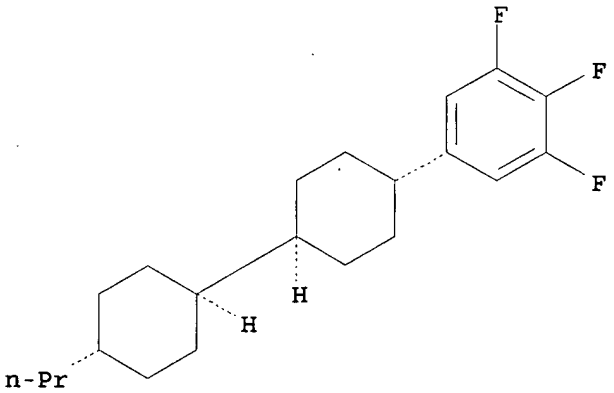
Relative stereochemistry.



CM 5

CRN 131819-23-3
CMF C21 H29 F3

Relative stereochemistry.



RN 185831-96-3 HCAPLUS
CN 2-Propenoic acid, 4-[[4-(1-phenylethoxy)phenyl]ethynyl]phenyl ester, polymer with DLC 43002 (9CI) (CA INDEX NAME)

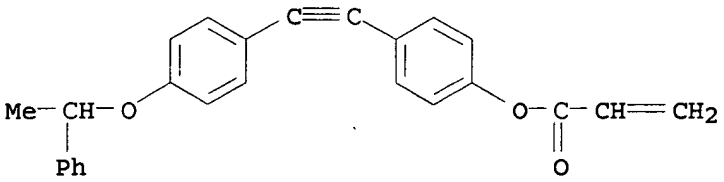
CM 1

CRN 185568-47-2
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 185452-78-2
CMF C25 H20 O3



RN 185832-06-8 HCAPLUS
CN 2-Propenoic acid, 4-[[4-(1-phenylethoxy)phenyl]ethynyl]phenyl ester, polymer with DLC 43001 (9CI) (CA INDEX NAME)

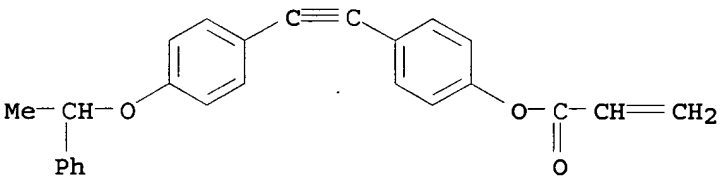
CM 1

CRN 185568-46-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 185452-78-2
CMF C25 H20 O3



IC ICM C09K019-12
ICS C09K019-02; C09K019-14; C09K019-16; C09K019-18; C09K019-20; C09K019-30; C09K019-34; C09K019-38; C09K019-60; G02F001-13
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 35, 75
IT 185452-28-2 185452-30-6 185452-32-8 185452-34-0
185452-41-9 185452-44-2 185452-47-5 185452-50-0
185452-54-4 185452-58-8 185452-62-4 185452-65-7
185452-67-9 185452-69-1 185452-71-5 185452-73-7
185452-75-9 185452-77-1 **185452-79-3** 185452-81-7
185768-13-2 185768-19-8 185768-20-1 185768-21-2
185768-22-3 185768-23-4 185768-24-5 185768-25-6
185768-26-7 185768-27-8 185768-28-9 185768-29-0
185768-30-3 185768-31-4 185768-32-5 185768-33-6
185768-34-7 185768-35-8 185768-36-9 **185831-96-3**
185831-97-4 185831-98-5 185831-99-6 185832-00-2
185832-01-3 185832-02-4 185832-03-5 185832-04-6
185832-05-7 **185832-06-8** 185832-07-9 185832-08-0
185832-09-1 185860-72-4 185860-73-5 185860-75-7
185860-76-8
(chiral nematic liquid-crystal composition containing chiral aromatic acrylate monomer with good storage stability)

L15 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:491877 HCAPLUS
DOCUMENT NUMBER: 117:91877
TITLE: Manufacture of optical materials
INVENTOR(S): Nakamura, Kanehiro; Matsumoto, Yoshifumi
PATENT ASSIGNEE(S): Tokuyama Soda K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04068001	A2	19920303	JP 1990-180647	19900710

PRIORITY APPLN. INFO.: JP 1990-180647 19900710

AB Optical materials, useful as substrates for optical disks, are manufactured by irradiation of a mixture containing monomers and photoinitiators by light which is scattered by light-scattering materials. Thus, feeding a mixture of bisphenol A di(vinylbenzyl) ether 40, styrene 40, isobornyl methacrylate 20, and 1-hydroxycyclohexyl Ph ketone 0.3 part into a glass mold, and irradiating by UV light through a ground glass (transparency 75%) member (A) gave a disk having double refraction ≤5, and 25 mm, at 0, and 30° incidence, vs. 125, and 75, resp., for disks manufactured without using A.

IT **142861-76-5P**
(manufacture of, for optical disks, with low double refraction)

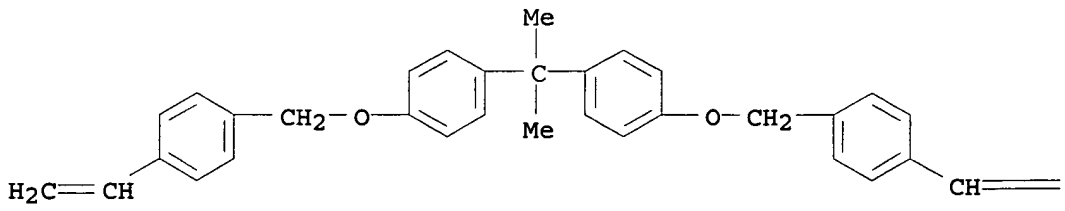
RN 142861-76-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with ethenylbenzene and 1,1'-(1-methylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 116237-20-8
CMF C33 H32 O2

PAGE 1-A



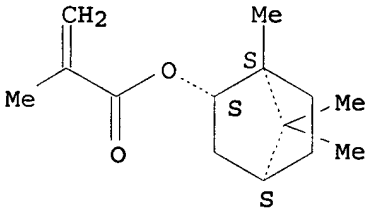
PAGE 1-B

$=CH_2$

CM 2

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 3

CRN 100-42-5
CMF C8 H8

$H_2C=CH-Ph$

IC ICM C08F002-48
ICS G02B001-04; G02B003-00; G02C007-02
CC 38-3 (Plastics Fabrication and Uses)
IT **142861-76-5P**
(manufacture of, for optical disks, with low double refraction)

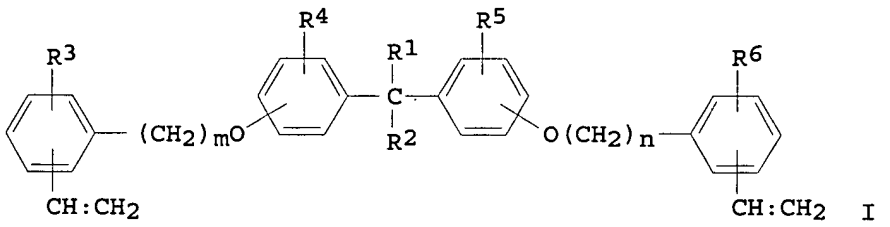
L15 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1992:31529 HCAPLUS
DOCUMENT NUMBER: 116:31529
TITLE: Vinylphenyl compounds, their preparation, and polymerizable compositions, crosslinked polymers, and optical disk substrates containing them
INVENTOR(S): Ueda, Masahide; Nakamura, Kanehiro; Matsumoto, Yoshifumi; Kusaba, Mari
PATENT ASSIGNEE(S): Tokuyama Soda Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 415729	A2	19910306	EP 1990-309424	19900829
EP 415729	A3	19910828		
R: DE, FR, GB, NL				
JP 03163039	A2	19910715	JP 1990-144490	19900604
JP 2868844	B2	19990310		
US 5138001	A	19920811	US 1990-572454	19900827
CA 2024187	AA	19910301	CA 1990-2024187	19900828

PRIORITY APPLN. INFO.: JP 1989-220360 A 19890829
JP 1990-144490 A 19900604

OTHER SOURCE(S): MARPAT 116:31529
GI



I

AB The compds. have the general formula I, where R1 = C6-12 aryl or C7-10 aralkyl; R2-6 = H or C1-4 alkyl; and m, n ≥1.

IT **135706-09-1 135706-10-4 135706-11-5**
135706-13-7 135706-14-8 135706-15-9
135732-45-5 135819-92-0 135821-22-6
(crosslinked, for optical disk substrates)

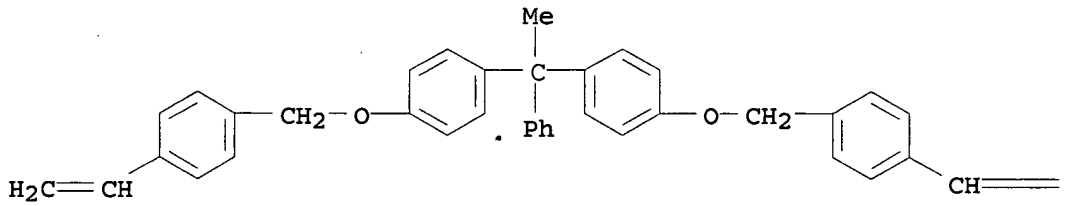
RN 135706-09-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with ethenylbenzene and 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 135705-97-4
CMF C38 H34 O2

PAGE 1-A



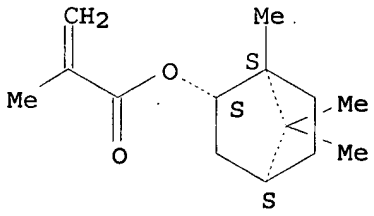
PAGE 1-B

$=CH_2$

CM 2

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 3

CRN 100-42-5
CMF C8 H8

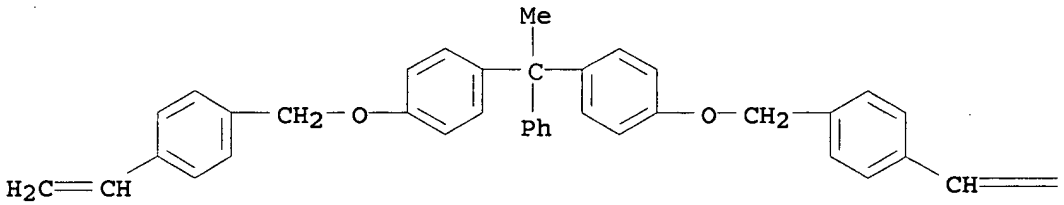
$H_2C=CH-Ph$

RN 135706-10-4 HCAPLUS
CN 2-Propenoic acid, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with ethenylbenzene and 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 135705-97-4
CMF C38 H34 O2

PAGE 1-A



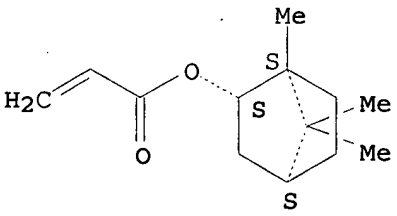
PAGE 1-B

$=CH_2$

CM 2

CRN 5888-33-5
CMF C13 H20 O2

Relative stereochemistry.



CM 3

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

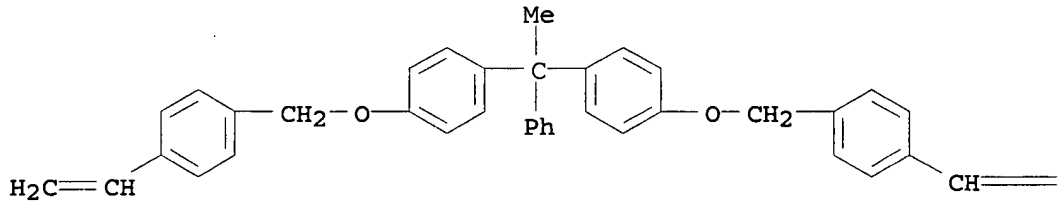
RN 135706-11-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-

yl ester, exo-, polymer with (1-methylethenyl)benzene and 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 135705-97-4
CMF C38 H34 O2

PAGE 1-A



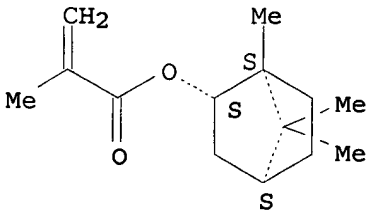
PAGE 1-B

$=CH_2$

CM 2

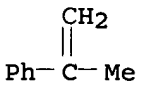
CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.



CM 3

CRN 98-83-9
CMF C9 H10

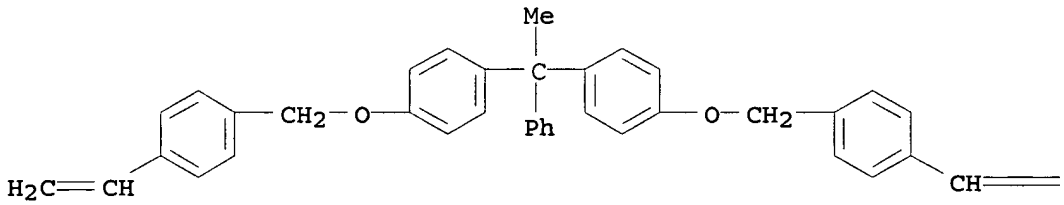


RN 135706-13-7 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, ethyl ester, polymer with 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 135705-97-4
CMF C38 H34 O2

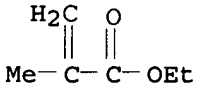
PAGE 1-A



PAGE 1-B

CM 2

CRN 97-63-2
CMF C6 H10 O2



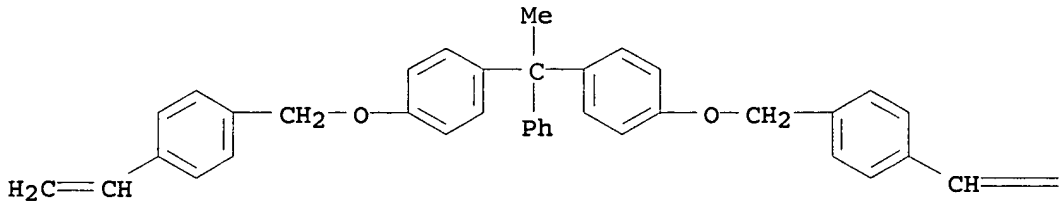
RN 135706-14-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,7,7-trimethylbicyclo[2.2.1]hept-2-yl ester, exo-, polymer with 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 135705-97-4

CMF C38 H34 O2

PAGE 1-A



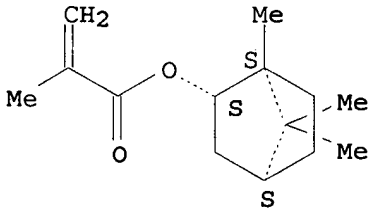
PAGE 1-B

$=CH_2$

CM 2

CRN 7534-94-3
CMF C14 H22 O2

Relative stereochemistry.

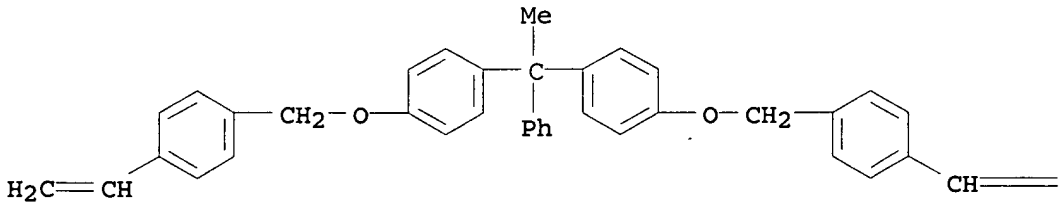


RN 135706-15-9 HCAPLUS
CN 2-Propenoic acid, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyloxy-2,1-ethanediyl) ester, polymer with 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 135705-97-4
CMF C38 H34 O2

PAGE 1-A



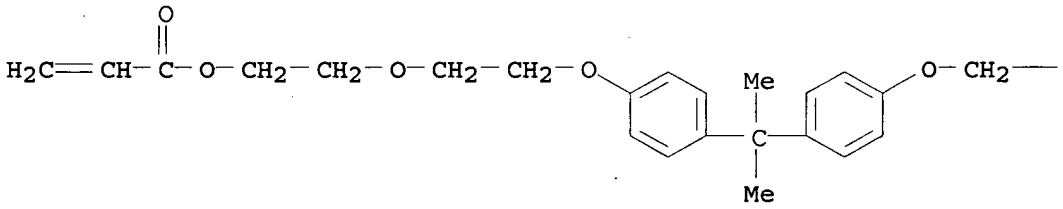
PAGE 1-B

$=CH_2$

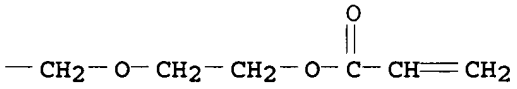
CM 2

CRN 56361-55-8
CMF C29 H36 O8

PAGE 1-A



PAGE 1-B

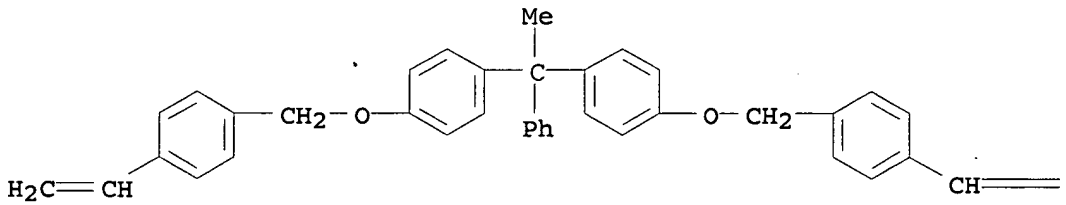


RN 135732-45-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, octahydro-4,7-methano-1H-inden-5-yl ester, polymer with ethenylbenzene and 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 135705-97-4
CMF C38 H34 O2

PAGE 1-A

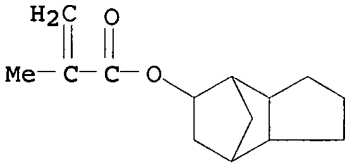


PAGE 1-B

$=CH_2$

CM 2

CRN 34759-34-7
CMF C14 H20 O2



CM 3

CRN 100-42-5
CMF C8 H8

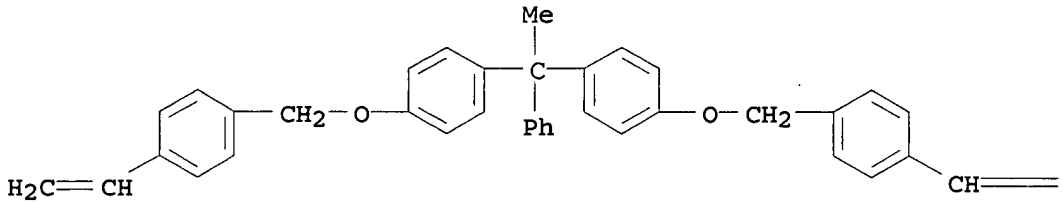
$H_2C=CH-Ph$

RN 135819-92-0 HCAPLUS
CN 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with ethenylbenzene and 1,1'-(1-phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI) (CA INDEX NAME)

CM 1

CRN 135705-97-4
CMF C38 H34 O2

PAGE 1-A

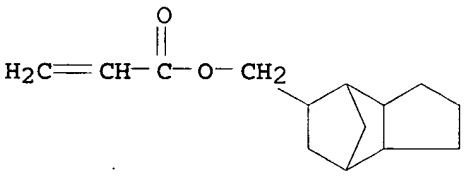


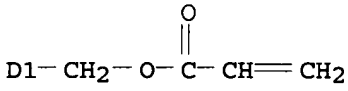
PAGE 1-B

$=CH_2$

CM 2

CRN 42594-17-2
CMF C18 H24 O4
CCI IDS





CM 3

CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

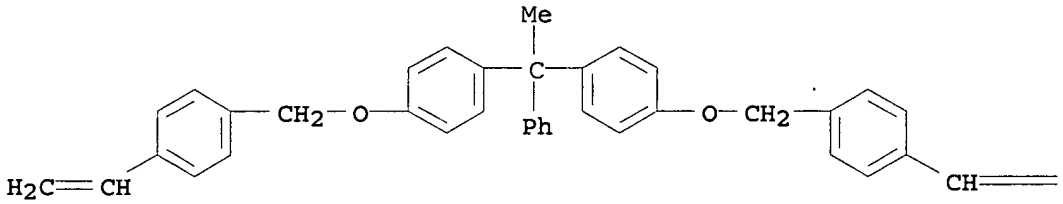
RN 135821-22-6 HCAPLUS
CN 2-Propenoic acid, (octahydro-4,7-methano-1H-indene-5,?-diyl)bis(methylene) ester, polymer with 1,1'-(1-

phenylethylidene)bis[4-[(4-ethenylphenyl)methoxy]benzene] (9CI)
(CA INDEX NAME)

CM 1

CRN 135705-97-4
CMF C38 H34 O2

PAGE 1-A

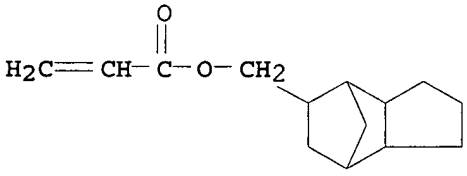


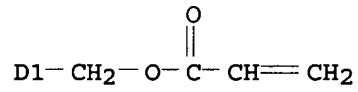
PAGE 1-B

═ CH_2

CM 2

CRN 42594-17-2
CMF C18 H24 O4
CCI IDS





IC ICM C07C043-215
ICS C07C041-16; C08F212-34; G11B007-24
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 38
IT 135705-98-5 135706-00-2 135706-02-4 135706-04-6

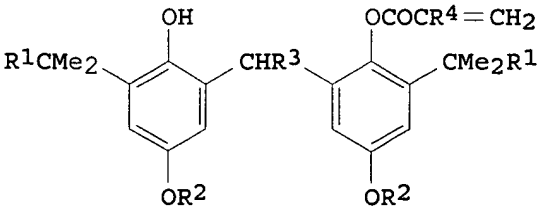
135706-08-0 **135706-09-1** **135706-10-4**
135706-11-5 135706-12-6 **135706-13-7**
135706-14-8 **135706-15-9** 135706-16-0
135706-17-1 135706-18-2 **135732-45-5** 135785-19-2
135785-20-5 **135819-92-0** **135821-22-6**
(crosslinked, for optical disk substrates)

L15 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:57541 HCAPLUS
DOCUMENT NUMBER: 112:57541
TITLE: (Meth)acrylate antioxidants for butadiene rubbers
INVENTOR(S): Sasaki, Manji; Yago, Shinichi; Inoue, Kikumitsu; Tanaka, Shinya; Kojima, Fumitoshi; Takada, Takeshi
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01180855	A2	19890718	JP 1988-6371	19880113
JP 2536003	B2	19960918		
US 4939196	A	19900703	US 1988-291965	19881230

PRIORITY APPLN. INFO.: JP 1988-6371 A 19880113

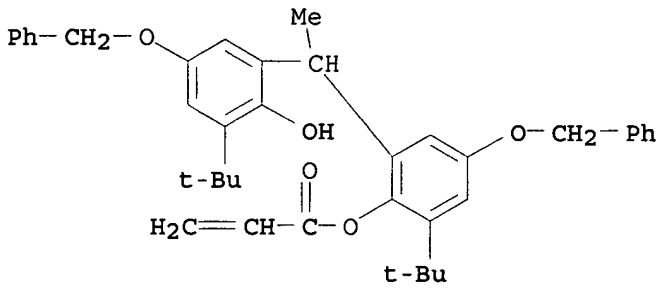
OTHER SOURCE(S): CASREACT 112:57541; MARPAT 112:57541
GI



I

AB Compds. I (R1 = C1-5 alkyl; R2 = C1-18 alkyl, C2-5 alkenyl, C7-9 arylalkyl, C2-5 aliphatic acyl, Bz; R3 = C1-11 alkyl; R4 = H, Me) are useful as antioxidants for butadiene (II) and styrene-II rubbers and styrene-II block copolymers. Thus, II rubber containing 0.2% I (R1-3 = Me, R4 = H) (III) had gel time 93 min and no yellowing at 150° under O after 180 min; vs. 5 and yellowing in the absence of III.
IT **124883-20-1P**

(preparation of, for antioxidants, for butadiene rubber)
RN 124883-20-1 HCAPLUS
CN 2-Propenoic acid, 2-(1,1-dimethylethyl)-6-[1-[3-(1,1-dimethylethyl)-2-hydroxy-5-(phenylmethoxy)phenyl]ethyl]-4-(phenylmethoxy)phenyl ester (9CI) (CA INDEX NAME)



IC ICM C07C069-54
ICS C08K005-13; C08L009-00
CC 37-6 (Plastics Manufacture and Processing)
IT 124883-14-3P 124883-15-4P 124883-16-5P 124883-17-6P 124883-18-7P 124883-19-8P **124883-20-1P** 124883-21-2P 124883-22-3P
(preparation of, for antioxidants, for butadiene rubber)

L15 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:76679 HCAPLUS
DOCUMENT NUMBER: 110:76679
TITLE: Polycarbonate-modified epoxy resin vinyl esters
INVENTOR(S): Hefner, Robert E., Jr.
PATENT ASSIGNEE(S): Dow Chemical Co., USA
SOURCE: U.S., 12 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4766184	A	19880823	US 1987-39191	19870414
BR 8903461	A	19910115	BR 1989-3461	19890705

PRIORITY APPLN. INFO.: US 1987-39191 19870414

AB Products of polymerizable ethylenically monounsatd. acids with reaction products of ≥1 epoxy resin and 0.1-10% (based on total) polycarbonate exhibited better mech. strength than similar products prepared without the polycarbonate. Thus, heating 500 g bisphenol A (I) diglycidyl ether (epoxy equivalent weight 181.53) to 160° under N, adding 5.39 g OH-terminated I-COCl2 copolymer

(II) with average mol. weight 6400, heating 20 min at 160°, adding 39.3 g I, cooling to 95° in 8 min, adding 0.4 g EtPh3POAc-HOAc complex, heating to 150° in 29 min, and heating at 150-160° for 23 min gave a light-yellow transparent liquid with epoxy equivalent weight 226.73. Reaction of 250 g this liquid with 91.98 g methacrylic acid at 90-115° in the presence of CrCl3 gave a vinyl ester resin with carboxylic acid and epoxide content 1% which was mixed with 200 ppm phenothiazine, 223.87 g styrene, 1% Bz2O2, and 0.05% PhNMe2, cast at room temperature, and postcured 2 h a 100° to give a molding with tensile strength 13,174 psi, compared with 12,670 psi for a similar molding prepared without II.

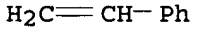
IT **118729-86-5P**
(manufacture of, with good mech. strength)

RN 118729-86-5 HCAPLUS

CN Carbonic dichloride, polymer with 4,4'-(1-methylethylidene)bis[phenol] and 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis[phenol], 2-methyl-2-propenoate, polymer with ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 100-42-5
CMF C8 H8

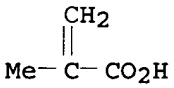


CM 2

CRN 118605-85-9
CMF (C29 H28 O4 . C15 H16 O2 . C Cl2 O)x . x C4 H6 O2

CM 3

CRN 79-41-4
CMF C4 H6 O2

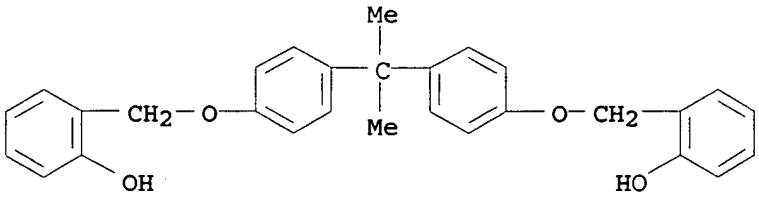


CM 4

CRN 230283-68-8
CMF (C29 H28 O4 . C15 H16 O2 . C Cl2 O)x
CCI PMS

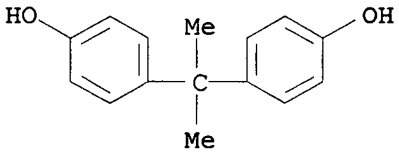
CM 5

CRN 128952-19-2
CMF C29 H28 O4



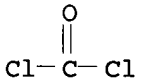
CM 6

CRN 80-05-7
CMF C15 H16 O2



CM 7

CRN 75-44-5
CMF C Cl2 O



IC ICM C08F283-02
INCL 525463000
CC 37-3 (Plastics Manufacture and Processing)
IT **118729-86-5P**
(manufacture of, with good mech. strength)

L15 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1976:181085 HCAPLUS
DOCUMENT NUMBER: 84:181085
TITLE: 2-Hydroxybenzophenone derivatives, uv absorbants for plastics
INVENTOR(S): Kamogawa, Hiromi
PATENT ASSIGNEE(S): Agency of Industrial Sciences and Technology, Japan
SOURCE: Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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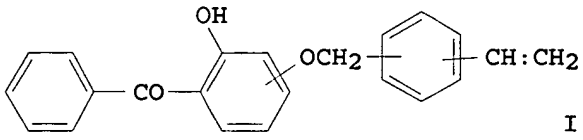
JP 50020059 B4 19750711 JP 1971-28544 1971 0428

PRIORITY APPLN. INFO.: JP 1971-28544 A 1971 0428

GI



I

AB 2-Hydroxybenzophenone derivs (I) copolymerizable with other monomers, useful as uv absorbents for plastics, were prepared by reaction of dihydroxybenzophenone with chloromethylstyrene in the presence of an alkali substance. Thus, a mixture of 2.1 g 2,4-dihydroxybenzophenone [131-56-6], 0.7 g. 85% KOH, 20 ml MeOH, and 0.1 g hydroquinone was mixed dropwise at 60° with 1.5 g p-chloromethylstyrene [1592-20-7] and refluxed to give a 2-hydroxybenzophenone derivative monomer [59058-28-5], which was copolymd. with Me methacrylate to give a copolymer [**59093-16-2**] in good yield. A transparent film obtained from the copolymer showed good uv resistance.

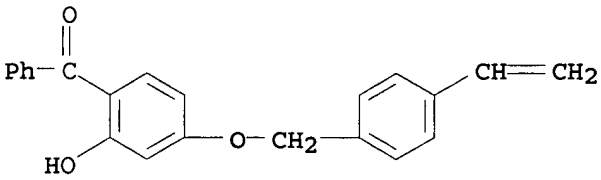
IT **59093-16-2**
(uv-resistant)

RN 59093-16-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with [4-[(4-ethenylphenyl)methoxy]-2-hydroxyphenyl]phenylmethanone (9CI) (CA INDEX NAME)

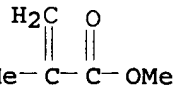
CM 1

CRN 59058-28-5
CMF C22 H18 O3



CM 2

CRN 80-62-6
CMF C5 H8 O2



IC C07C; C08K; B01J
CC 36-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 25
IT **59093-16-2**
(uv-resistant)

=> d l27 1-15 ibib abs hitstr hitind

L27 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:66020 HCAPLUS
DOCUMENT NUMBER: 136:126310
TITLE: Organic optical components and preparation thereof
INVENTOR(S): Summersgill, Philip; Grierson, Thomas Harvey; Ryan, Timothy George; Carter, Neil
PATENT ASSIGNEE(S): Epigem Limited, UK
SOURCE: U.S., 25 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6341190	B1	20020122	US 1999-441703	1999 1116
			<--	
WO 9509726	A1	19950413	WO 1994-GB2118	1994 0929
			<--	
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ, VN				
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9477045	A1	19950501	AU 1994-77045	1994 0929
			<--	
PRIORITY APPLN. INFO.:			GB 1993-20326 A	1993 1001
			<--	
			WO 1994-GB2118 W	1994 0929
			<--	

AB Polymer thin films for use as organic optical components (e.g., **waveguides**, splitters) which comprise a first layer of an optically transmissive first polymer having a surface in which ≥1 retaining feature adapted to retain a polymer is defined and a retention layer of an optically transmissive UV-curable second polymer retained within the one retaining feature, the second polymer having a refractive index which is greater than the refractive index of the first polymer are described which are provided with an overlay 0.001-1.5 μm thick of the second polymer over the first layer adjacent to the retaining feature(s) having. Methods for producing the films by applying a resin under pressure (e.g., bead coating, roller coating) to an appropriate substrate are also described.

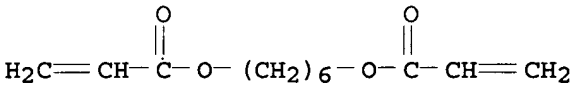
IT **67327-15-5**, Ebecryl 600-Hexane diol diacrylate copolymer
390823-76-4, Ebecryl 600-Ebecryl 285-1,6-hexanediol diacrylate copolymer
(polymeric optical components and their formation)

RN 67327-15-5 HCAPLUS

CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

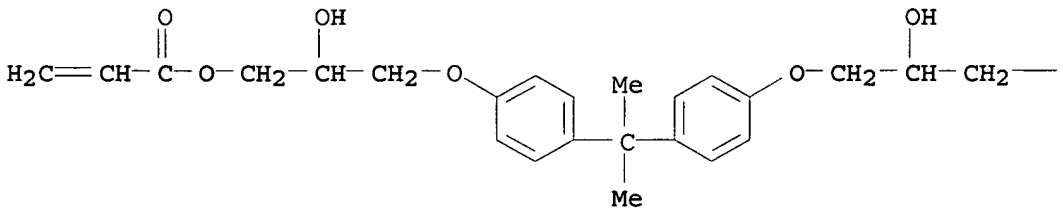
CRN 13048-33-4
CMF C12 H18 O4



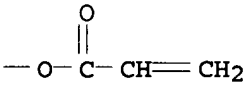
CM 2

CRN 4687-94-9
CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



RN 390823-76-4 HCAPLUS

CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with Ebecryl 285 and (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

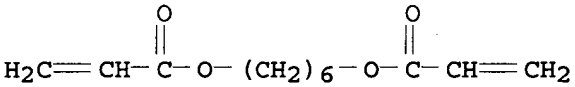
CM 1

CRN 199685-30-8
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

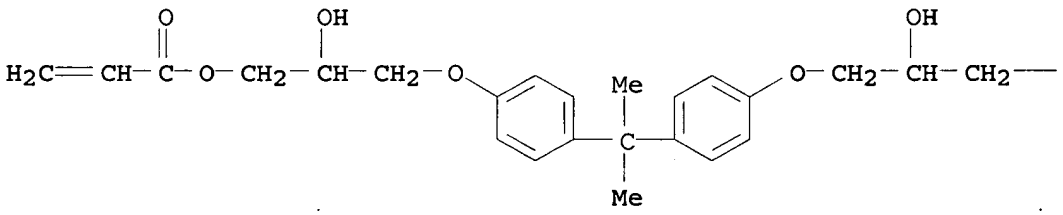
CRN 13048-33-4
CMF C12 H18 O4



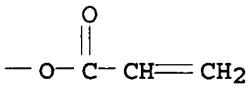
CM 3

CRN 4687-94-9
CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



IC ICM G02B006-10
INCL 385130000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
IT Coating process
Optical beam splitters
Optical **waveguides**
(polymeric optical components and their formation)
IT 97-90-5D, Ethylene glycol dimethacrylate, polymers with fluorodimethacrylate 97-90-5D, Ethylene glycol dimethacrylate,

polymers with hexafluoroglutaric acid, methacrylate derivs. 376-73-8D, Hexafluoroglutaric acid, methacrylate derivs., homopolymers and polymers with ethyleneglycol dimethacrylate **67327-15-5**, Ebecryl 600-Hexane diol diacrylate copolymer 109049-14-1, Photomer 5018 390823-74-2 **390823-76-4**, Ebecryl 600-Ebecryl 285-1,6-hexanediol diacrylate copolymer 390823-77-5, 1,6-Hexanediol diacrylate-formaldehyde-hydroxybutyl acrylate-melamine copolymer
(polymeric optical components and their formation)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:440193 HCAPLUS
DOCUMENT NUMBER: 133:81408
TITLE: Photosensitive optical **waveguide** components and manufacture of optical **waveguides**
INVENTOR(S): Toyota, Seiji; Imamura, Saburo; Tomaru, Akira; Kurihara, Takashi; Enbutsu, Akitsugu; Hayashida, Shunichi; Maruno, Toru
PATENT ASSIGNEE(S): Nippon Telegraph and Telephone Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000180643	A2	20000630	JP 1999-284886 <--	1999 1005
JP 3133039	B2	20010205		
US 6537723	B1	20030325	US 1999-409078 <--	1999 0930
US 2003148228	A1	20030807	US 2002-262777 <--	2002 1002
US 6806040	B2	20041019		
US 2004175650	A1	20040909	US 2004-803393 <--	2004 0318
US 2004175655	A1	20040909	US 2004-803435 <--	2004 0318
US 6933097	B2	20050823		
US 2004175651	A1	20040909	US 2004-803446 <--	2004 0318

PRIORITY APPLN. INFO.: JP 1998-283142 A 1998 1005
<--
US 1999-409078 A3 1999 0930

US 2002-262777 A3 2002 1002

GI

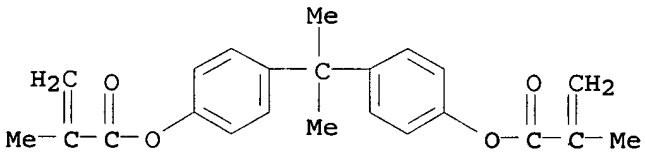
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The components comprise organic oligomers I, II and III (X, X1,2 = H, D, halo, alkyl, alkoxy; m = 1-5; R1 = Me, Et, isopropyl; R2 = O1/2, Me, Et, isopropyl; R3 = O1/2, O(CH2)2OCH:CHCH3; Z = oxirane, bicyclo[4.1.0]heptane; R4,5 = H, halo, alkyl, alkoxy, trifluoromethyl; X3,4 = alkylene, alkyleneoxy, oxyalkylene. aromatic ring).

IT **3253-39-2**
(photosensitive optical **waveguide** components and manufacture of optical **waveguides**)

RN 3253-39-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)di-4,1-phenylene ester (9CI) (CA INDEX NAME)



IC ICM G02B006-12
ICS C08L083-04; G02B006-13; G03F007-075

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

ST optical **waveguide** photosensitive silicone oligomer manuf

IT Optical **waveguides**
(photosensitive optical **waveguide** components and manufacture of optical **waveguides**)

IT Oligomers
Polysiloxanes, uses
(photosensitive optical **waveguide** components and manufacture of optical **waveguides**)

IT **3253-39-2** 220341-25-3
(photosensitive optical **waveguide** components and manufacture of optical **waveguides**)

L27 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:117255 HCAPLUS
DOCUMENT NUMBER: 132:144518

TITLE: Lens sheet and method for producing the same
INVENTOR(S): Ookawa, Makoto; Hamada, Masao; Motonaga, Akira; Konami, Yukichi; Kogame, Akiyoshi
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

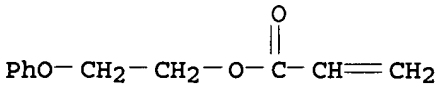
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008494	A1	20000217	WO 1999-JP4204	1999 0804
			<--	
W: KR, US				
JP 2000056106	A2	20000225	JP 1998-222075	1998 0805
			<--	
JP 2000238052	A2	20000905	JP 1999-48242	1999 0225
PRIORITY APPLN. INFO.:			JP 1998-222075 A	1998 0805
			<--	
			JP 1999-48242 A	1999 0225

AB A lens sheet comprises a transparent base made of a transparent resin sheet and a lens part provided on at least one side of the base, made of an active energy beam-curing resin, such as an UV-curing resin, and including a lot of lens units of a prism row each prism of which has a triangular cross section. A relaxation layer having a thickness which is 1 to 30 % of the height of the lens part is interposed between the transparent base and the lens part. The relaxation layer is made of an UV-curing resin and integrated with the lens part. Since the thickness of the relaxation layer is desirably determined, the surface shape of the lens part is not deformed despite of the polymerization shrinkage of the active energy beam-curing composition and no optical defects such as spot patterns and glaring are produced.

IT **75797-27-2P**, Epoxy Ester 3000A-Viscoat 192 copolymer
(lens sheet for liquid crystal display)
RN 75797-27-2 HCAPLUS
CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, polymer with 2-phenoxyethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

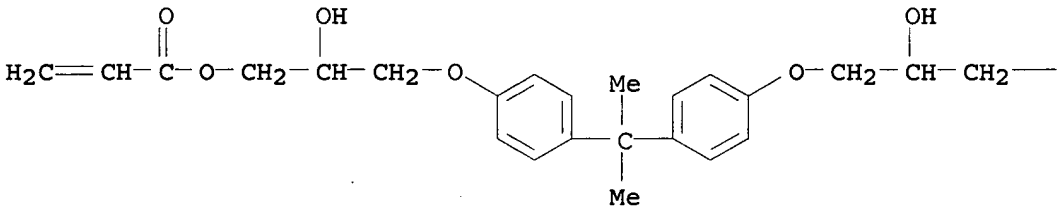
CRN 48145-04-6
CMF C11 H12 O3



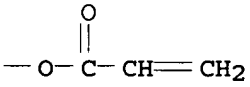
CM 2

CRN 4687-94-9
CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



IC ICM G02B003-00
ICS G02B003-06; G02B005-04; G02B005-02; G03B021-62; G02F001-1335; F21V008-00; B32B027-30
CC 74-13 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 73
ST lens sheet optical **waveguide** liq crystal display photoresist
IT Liquid crystal displays
Microlenses
Optical **waveguides**
Photoresists
Prisms
(lens sheet for liquid crystal display and method for producing the same)
IT **75797-27-2P**, Epoxy Ester 3000A-Viscoat 192 copolymer
(lens sheet for liquid crystal display)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1999:549478 HCAPLUS
DOCUMENT NUMBER: 131:151501
TITLE: Fabrication of diffraction gratings for optical-signal devices and optical signal devices using same
INVENTOR(S): Eldada, Louay; Yin, Shing
PATENT ASSIGNEE(S): AlliedSignal Inc., USA

SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9942868	A1	19990826	WO 1999-US3593	1999 0219 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2319563	AA	19990826	CA 1999-2319563	1999 0219 <--
AU 9926875	A1	19990906	AU 1999-26875	1999 0219 <--
EP 1060417	A1	20001220	EP 1999-907146	1999 0219 <--
R: DE, FR, GB, IT, SE				
JP 2002504701	T2	20020212	JP 2000-532748	1999 0219 <--
PRIORITY APPLN. INFO.:			US 1998-26764 A	1998 0220 <--
			WO 1999-US3593 W	1999 0219

AB Method of fabricating a wavelength filter on a substrate in which a phase mask having corrugations is placed over a polymeric substrate composed of at least two co-monomers having different indexes of refraction and passing light through the phase mask to form light into two beams corresponding to different diffraction orders to form refractive gratings capable of reflecting light of a selective wavelength. Optical signal devices employing the above stated gratings are also disclosed.

IT **138089-36-8 252301-20-5**, 1,6-Hexanediol dimethacrylate
(fabrication of diffraction gratings for optical signal devices and optical signal devices containing same)

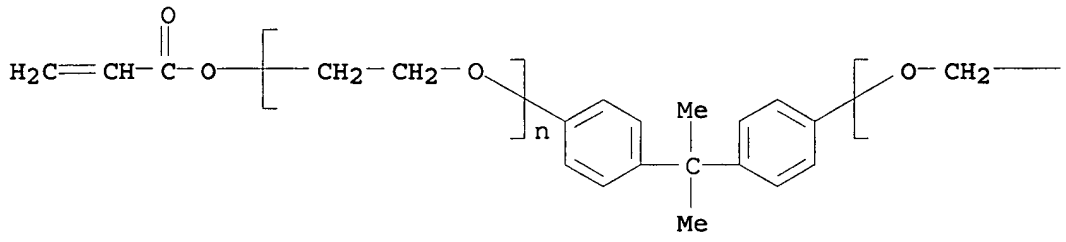
RN 138089-36-8 HCAPLUS

CN 2-Propenoic acid, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] ester, polymer with α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

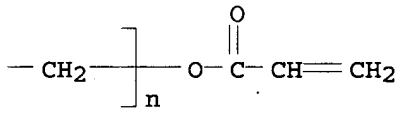
CM 1

CRN 64401-02-1
CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4
CCI PMS

PAGE 1-A

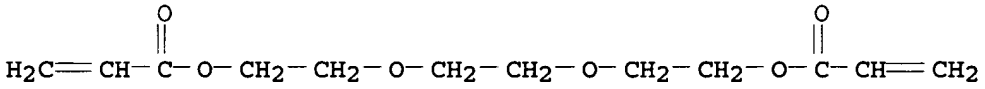


PAGE 1-B



CM 2

CRN 42978-66-5
CMF C15 H24 O6
CCI IDS



3 (D1—Me)

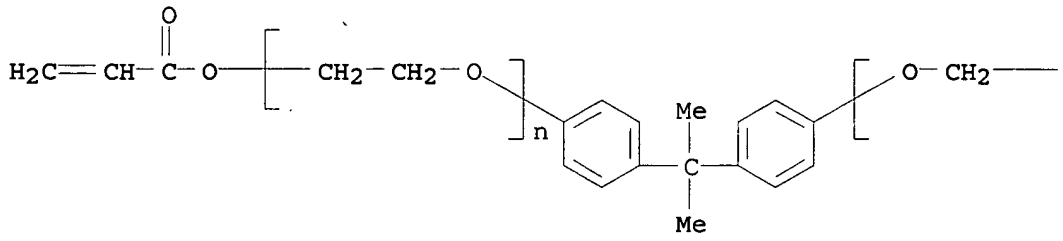
RN 252301-20-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,6-hexanediyl ester, polymer with (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] di-2-propenoate and α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl)] (9CI) (CA INDEX NAME)

CM 1

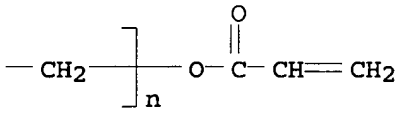
CRN 64401-02-1

CMF (C2 H4 O)n (C2 H4 O)n C21 H20 O4
CCI PMS

PAGE 1-A

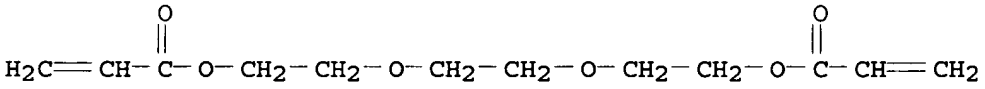


PAGE 1-B



CM 2

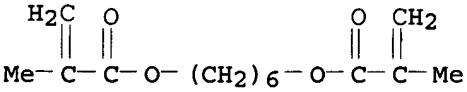
CRN 42978-66-5
CMF C15 H24 O6
CCI IDS



3 (D1—Me)

CM 3

CRN 6606-59-3
CMF C14 H22 O4



IC ICM G02B006-138
ICS G02B006-293
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
IT Diffraction gratings

Mach-Zehnder interferometers
Optical couplers
Optical filters
Optical instruments
Optical refraction
Optical **waveguides**
Refractive index
(fabrication of diffraction gratings for optical signal devices and optical signal devices containing same)

IT 7440-21-3, Silicon, properties **138089-36-8**
252301-20-5, 1,6-Hexanediol dimethacrylate
(fabrication of diffraction gratings for optical signal devices and optical signal devices containing same)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:608659 HCAPLUS
DOCUMENT NUMBER: 129:217061
TITLE: Polymers comprising a fluorinated carbonate moiety
INVENTOR(S): Woudenberg, Richard Herman; Boonstra, Tjerk Oedse
PATENT ASSIGNEE(S): Akzo Nobel N. V., Neth.
SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9838237	A1	19980903	WO 1998-EP717	1998 0204
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W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2282622	AA	19980903	CA 1998-2282622	1998 0204
			<--	
AU 9863966	A1	19980918	AU 1998-63966	1998 0204
			<--	
EP 963395	A1	19991215	EP 1998-909428	1998 0204
			<--	

R: BE, DE, FR, GB, NL
US 6376639 B1 20020423 US 1999-379924 1999 0824
<--
PRIORITY APPLN. INFO.: US 1997-41622P P 1997 0327
<--
EP 1997-200511 A 1997 0224
<--
WO 1998-EP717 W 1998 0204
<--

AB Crosslinkable polycarbonates based on units formed from hexafluoroisopropylidenebis(4-cyclohexanol) (I) and optionally, hexafluoroisopropylidenebis(4-phenol)(II) , HOAC(:B)NQC(:B)A1OH, or HOAC(A2OQ)DA1OH [A, A1, A2 = single bond or (halogenated) C1-12 alkylene, or A, A1, and A2 together with the C atoms to which they are bonded form a 5- or 6-membered ring, B = O or (halogenated) C1-4 alkyl, Q = OCO(:E)D, D = H or (halogenated) C1-4 alkyl, E = (halogenated) C1-6 alkylidene]. The polymers of the invention can be used in cladding layers or **waveguides**, in particular for thermooptical devices. A typical polymer was manufactured by polymerization of I 150, II bischloroformate 398.7, and 2,3-dihydroxypropyl methacrylate 68.9 g in CH2Cl2-THF mixture in the presence of C5H5N.

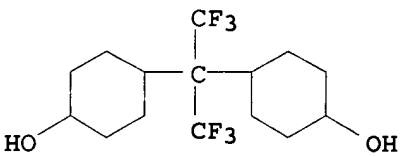
IT **212576-78-8P**
(fluorine-containing polycarbonates for optical devices)

RN 212576-78-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,3-dihydroxypropyl ester, polymer with 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[cyclohexanol] and [2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]di-4,1-phenylene bis(carbonochloridate) (9CI) (CA INDEX NAME)

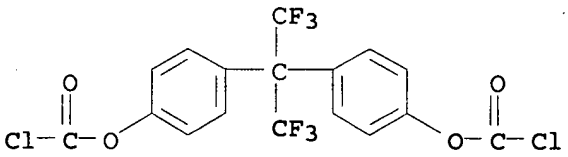
CM 1

CRN 119170-78-4
CMF C15 H22 F6 O2



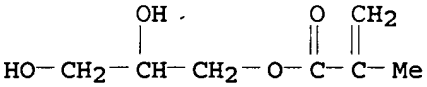
CM 2

CRN 16881-56-4
CMF C17 H8 Cl2 F6 O4



CM 3

CRN 5919-74-4
CMF C7 H12 O4



IC ICM C08G064-02
ICS C08G064-16; G02B001-04; C08G064-14; G02B006-16; G02F001-01; G02B006-12
CC 35-5 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 73
IT Plastic films
Waveguides
(fluorine-containing polycarbonates for optical devices)
IT **212576-78-8P** 212576-80-2P
(fluorine-containing polycarbonates for optical devices)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:729345 HCAPLUS
DOCUMENT NUMBER: 128:28391
TITLE: Low-loss, single-mode, organic polymer **waveguides** utilizing refractive index tailoring
AUTHOR(S): Phelps, Christopher W.; Barry, Timothy S.; Rode, Daniel L.; Krchnavek, Robert R.
CORPORATE SOURCE: Department of Electrical Engineering, Washington University, St. Louis, MO, 63130, USA
SOURCE: Journal of Lightwave Technology (**1997**), 15(10), 1900-1905
CODEN: JLTEDG; ISSN: 0733-8724
PUBLISHER: Institute of Electrical and Electronics Engineers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Low-loss, single-mode optical **waveguides** have been fabricated from photopolymerizable acrylic monomers. The material system consists of a low-index cladding resin and a high-index core resin. The two resins are miscible so that precise control over the refractive index can be obtained. This allows the fabrication of single-mode **waveguides** with specific cross-sectional dimensions. One advantage of this is the ability to fabricate **waveguides** with high coupling efficiencies

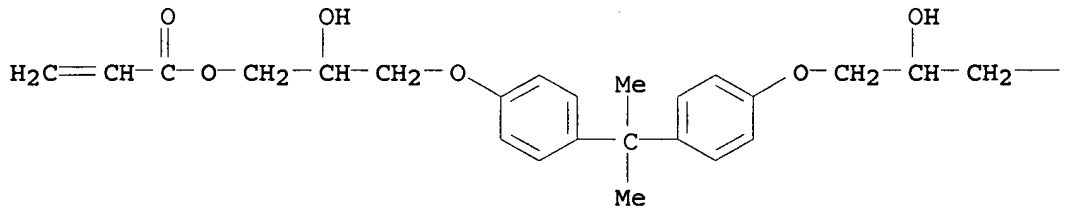
to other devices such as optical fiber or semiconductor lasers. The materials adhere to a wide variety of substrates and exhibit average **waveguide** losses of 0.56 dB/cm at 1300 nm for single-mode **waveguides**. Details of the fabrication procedure, index of refraction tailoring technique, and **waveguide** loss data are presented.

IT **4687-94-9**, Ebecryl 600
(low-loss, single-mode, organic polymer **waveguides** utilizing refractive index tailoring)

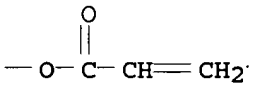
RN 4687-94-9 HCAPLUS

CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38

ST polyacrylic **waveguide** refraction index tailoring

IT Polyurethanes, uses
(acrylates; low-loss, single-mode, organic polymer **waveguides** utilizing refractive index tailoring)

IT Optical **waveguides**
Refractive index
(low-loss, single-mode, organic polymer **waveguides** utilizing refractive index tailoring)

IT Acrylic polymers, uses
(low-loss, single-mode, organic polymer **waveguides** utilizing refractive index tailoring)

IT **4687-94-9**, Ebecryl 600 125622-47-1, Ebecryl 4883
(low-loss, single-mode, organic polymer **waveguides** utilizing refractive index tailoring)

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:718090 HCAPLUS
DOCUMENT NUMBER: 128:28623
TITLE: Nitrone compound as photopolymer polymerization inhibitor and contrast-enhancing additive

INVENTOR(S): Stengel, Kelly M. T.; Shacklette, Lawrence W.; Eldada, Louay; Yardley, James T.; Xu, Chengzeng; Zimmerman, Scott M.; Horn, Keith A.
PATENT ASSIGNEE(S): Alliedsignal Inc., USA
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9740421	A1	19971030	WO 1997-US6406	1997 0417 <--
W: JP, KR RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6162579	A	20001219	US 1996-634997	1996 0419 <--
EP 894286	A1	19990203	EP 1997-921237	1997 0417 <--
R: CH, DE, FR, GB, IT, LI, SE, IE				
JP 2000510605	T2	20000815	JP 1997-538181	1997 0417 <--
KR 2000010541	A	20000215	KR 1998-708377	1998 1019 <--
PRIORITY APPLN. INFO.:			US 1996-634997 A	1996 0419 <--
			WO 1997-US6406 W	1997 0417 <--

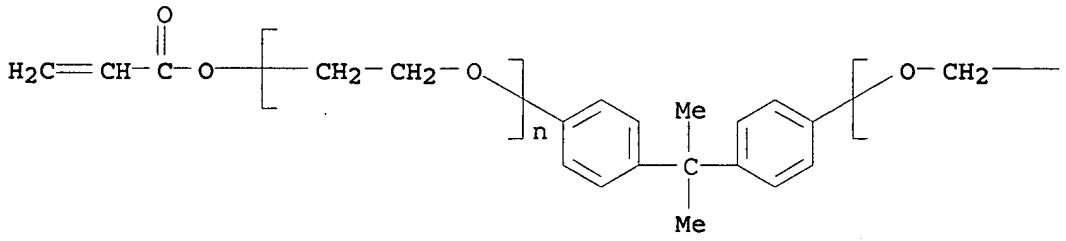
AB The invention provides an improved photopolymerizable composition suitable for producing a high-contrast **waveguide.** The photopolymerizable composition is an admixt. of a free-radical polymerizable acrylate or methacrylate having at least two ethylenically unsatd. groups, a photoinitiator, and a nitrone compound as a polymerization inhibitor and a contrast-enhancing additive.

IT **64401-02-1**
(photopolymerizable compns. for high-contrast **waveguide** preparation containing nitrone compds. and)

RN 64401-02-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



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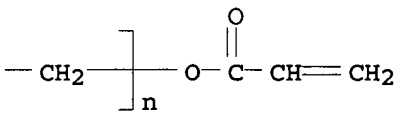


IC ICM G03F007-031
ICS G03F007-09
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 73
ST photopolymerizable compn nitrone compd **waveguide**
IT **Waveguides**
(high-contrast; photopolymerizable compns. containing acrylate or methacrylate having at least two ethylenically unsatd. groups and nitrone compound for manufacture of)
IT Photoimaging materials
(photopolymerizable; containing acrylate or methacrylate having at least two ethylenically unsatd. groups and nitrone compound for high-contrast **waveguide** manufacture)
IT 6683-19-8, Irganox 1010
(antioxidant; photopolymerizable compns. for high-contrast **waveguide** preparation containing nitrone compds. and)
IT 1137-96-8, N-Phenyl-α-phenylnitrone 3376-24-7, N-tert-Butyl-α-phenylnitrone 3585-88-4, N-tert-Butyl-α-(p-nitrophenyl)nitrone 3585-90-8, N-Phenyl-α-(p-nitrophenyl)nitrone 4745-47-5 5909-74-0, N-Phenyl-α-(p-chlorophenyl)nitrone 26447-78-9, N-Phenyl-α-(p-cyanophenyl)nitrone 40117-28-0, N-tert-Butyl-α-(p-methoxyphenyl)nitrone 40117-30-4, N-tert-Butyl-α-(p-chlorophenyl)nitrone 53548-19-9, N-Phenyl-α-(2-nitrophenyl)nitrone 66893-81-0, N-tert-Butyl-α-(4-pyridyl-1-oxide) nitrone 67036-01-5, N-tert-Butyl-α-(p-cyanophenyl)nitrone 93749-85-0, N-(p-Cyanophenyl)-α-(p-methoxyphenyl)nitrone 199396-04-8, N-Phenyl-α-(p-aminophenyl)nitrone 199396-05-9, N-(p-Nitrophenyl)-α-(p-methoxyphenyl)nitrone 199396-06-0, N-(p-Nitrophenyl)-α-(p-aminophenyl)nitrone 199396-07-1, N-(p-Cyanophenyl)-α-(p-aminophenyl)nitrone 199396-08-2, N-(p-Cyanophenyl)-α-(p-hydroxyphenyl)nitrone 199396-09-3 199396-10-6, N-(3,5-Bis (trifluoromethyl)phenyl)-α-(p-chlorophenyl)nitrone
(photopolymerizable compns. for high-contrast **waveguide** preparation containing acrylates having at least two ethylenically

unsatd. groups and)
IT 3317-61-1, 5,5-Dimethyl-1-pyrroline N-oxide 13048-33-4, 1,6-Hexanediol diacrylate 24650-42-8, Irgacure 651 **64401-02-1** 90751-07-8, Cyasorb UV3346
(photopolymerizable compns. for high-contrast **waveguide** preparation containing nitrone compds. and)

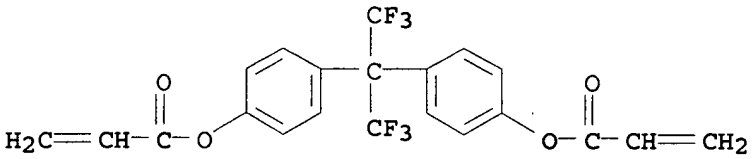
L27 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:619181 HCAPLUS
DOCUMENT NUMBER: 127:294422
TITLE: Manufacture of optical modules with epoxy resins or (meth)acrylic polymers
INVENTOR(S): Ueno, Takumi; Amo, Satoru; Eguchi, Kuniyuki
PATENT ASSIGNEE(S): Hitachi, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09243869	A2	19970919	JP 1996-57188	1996 0314
			<--	
PRIORITY APPLN. INFO.:			JP 1996-57188	1996 0314
			<--	

AB The manufacturing process consists of detecting and memorizing relative positions of optical elements on base substrates by a light scanning controller, immersing the base substrates carrying optical parts in photocurable solns. containing epoxy compds. and photoacid generators, and irradiating the solns. by laser light for curing the solns. and forming optical paths between the optical elements. Alternatively, the photocurable solns. contain (meth)acrylic monomers and photoradical generators. The **waveguide** path-forming process using laser scanning photocuring gives optical modules with easy adjustment of the optical axes. Semiconductor laser diodes, photodetectors, and optical fibers were fixed on a substrate, the positional informations of the elements were input into a semiconductor laser controller, the substrate was immersed in a photocurable solution containing 30 parts 2,2-bis(4-glycidyloxyphenyl)hexafluoropropane and 1 part diphenyliodonium triflate, and Ar laser light and the substrate were moved up and down based on the positional informations for optical bonding of the elements to give an optical module.
IT **137515-27-6P**
(optical modules manufacture with photocurable epoxy resins or (meth)acrylic polymers)
RN 137515-27-6 HCAPLUS
CN 2-Propenoic acid, [2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]di-4,1-phenylene ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 108050-41-5
CMF C21 H14 F6 O4



IC ICM G02B006-42
ICS C08G059-22; G02B006-13; G02B006-30
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 73
IT Optical **waveguides**
(optical modules manufacture with photocurable epoxy resins or (meth)acrylic polymers)
IT 57592-67-3P, Hexanediol diacrylate homopolymer
137515-27-6P 153893-38-0P 197165-59-6P 197165-62-1P
(optical modules manufacture with photocurable epoxy resins or (meth)acrylic polymers)

L27 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1997:244456 HCAPLUS
DOCUMENT NUMBER: 127:10830
TITLE: Polymers for optical-communication device fabrication. Optical adhesives and polyimide **waveguides**
AUTHOR(S): Maruno, T.
CORPORATE SOURCE: NTT Opto-electronics Laboratories, Musashino, 180, Japan
SOURCE: Materials Research Society Symposium Proceedings (**1997**), 444(Materials for Mechanical and Optical Microsystems), 27-38
CODEN: MRSPDH; ISSN: 0272-9172
PUBLISHER: Materials Research Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two types of novel organic materials were specifically developed for the fabrication of optical-communications systems devices. One is a UV-curable durable epoxy adhesive featuring refractive index controllability, low shrinkage during curing, and a low heat-expansion coefficient These optically transparent adhesives are refractive index controllable between 1.45 and 1.59, and were successfully applied to many optical devices that require return losses of >40 dB. The precision adhesives show an extremely low volume shrinkage of <2% during curing. The submicron positioning accuracy of these adhesives allows the fabrication of high-performance laser-diode modules and optical modulators. The other type of material is a fluorinated polyimide (F-PI) for optical **waveguides**; it features high optical transparency from visible to near-IR and good heat resistance. Buried optical **waveguides** fabricated from F-PI operate in a single mode. They also exhibit a low loss of <0.3 dB/cm at the wavelength of 1.3 μm, and are heat and moisture resistant: the increase in optical loss is <5% after heating at 300° for 1 h or after exposure to 85% relative humidity at 85°

for 24h.

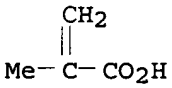
IT **160371-82-4 160371-83-5**
(reflective index controllable optical adhesives for optical communication devices)

RN 160371-82-4 HCAPLUS

CN Phenol, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with (chloromethyl)oxirane, bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4
CMF C4 H6 O2

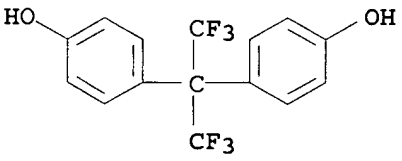


CM 2

CRN 68050-65-7
CMF (C15 H10 F6 O2 . C3 H5 Cl O)x
CCI PMS

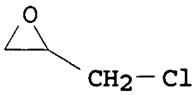
CM 3

CRN 1478-61-1
CMF C15 H10 F6 O2



CM 4

CRN 106-89-8
CMF C3 H5 Cl O

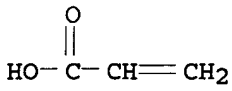


RN 160371-83-5 HCAPLUS

CN Phenol, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis-, polymer with (chloromethyl)oxirane, di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7
CMF C3 H4 O2

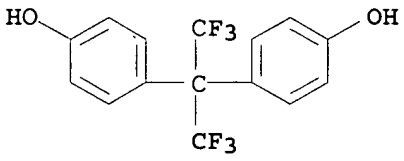


CM 2

CRN 68050-65-7
CMF (C15 H10 F6 O2 . C3 H5 Cl O)x
CCI PMS

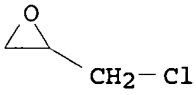
CM 3

CRN 1478-61-1
CMF C15 H10 F6 O2



CM 4

CRN 106-89-8
CMF C3 H5 Cl O



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
ST polymer optical adhesive polyimide **waveguide**
IT Optical **waveguides**
(fluorinated polyimide **waveguides** for optical communication)
IT 68050-65-7 135283-60-2 135466-58-9 143549-25-1 143549-26-2
160073-03-0 160099-23-0 160371-68-6 160371-69-7
160371-78-8 160371-79-9 160371-80-2 **160371-82-4**
160371-83-5 160371-87-9
(reflective index controllable optical adhesives for optical communication devices)
IT 150872-76-7D, P 16 (Polyimide), fluorinated
(**waveguide** for optical communications)
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L27 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:835575 HCAPLUS
DOCUMENT NUMBER: 123:242010
TITLE: Process for making array of tapered photopolymerized **waveguides**
INVENTOR(S): Beeson, Karl Wayne; Zimmerman, Scott Moore; Ferm, Paul Michael; McFarland, Michael James
PATENT ASSIGNEE(S): Alliedsignal Inc., USA
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9513567	A1	19950518	WO 1994-US11913	1994 1018 <--
W: AU, CA, CN, FI, JP, KR RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2174851	AA	19950518	CA 1994-2174851	1994 1018 <--
AU 9510403	A1	19950529	AU 1995-10403	1994 1018 <--
EP 728327	A1	19960828	EP 1995-901008	1994 1018 <--
EP 728327	B1	20010321		
R: DE, FR, GB, IT, NL				
CN 1141088	A	19970122	CN 1994-194800	1994 1018 <--
JP 09500981	T2	19970128	JP 1994-513841	1994 1018 <--
JP 2704047	B2	19980126		
PRIORITY APPLN. INFO.:			US 1993-148794 A	1993 1108 <--
			WO 1994-US11913 W	1994 1018 <--

AB The present invention is directed to a process for making an array of tapered photopolymd. **waveguides.** The tapered **waveguides** are useful as a display means in direct view

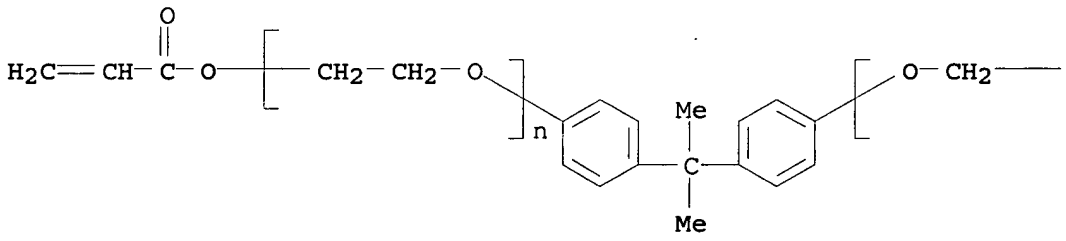
devices and projection display devices. In step (a), a photomask is placed in substantial contact with a substrate wherein the photomask has opaque and transparent regions. In step (b), a substantially uniform thickness of a photopolymerizable mixture is placed on the substrate so that the substrate is positioned between the photopolymerizable mixture and the photomask wherein (i) the photopolymerizable mixture comprises at least one reactive monomer and photoinitiator and (ii) the photoinitiator is present in an amount sufficient to form a gradient of substantially collimated actinic radiation across the thickness of the photopolymerizable mixture during the subsequent step (c). In the step (c), while maintaining the photopolymerizable mixture and substrate in a substantially fixed plane relative to the substantially collimated actinic radiation, the photopolymerizable mixture is exposed through the transparent regions of the photomask to the substantially collimated actinic radiation for a time sufficient to form an array of tapered photopolymd. **waveguides** wherein (i) the tapered end of each of the **waveguides** extends outward from the substrate, (ii) each of the **waveguides** has a light input surface adjacent the substrate and a light output surface distal from the light input surface, and (iii) the area of the light input surface of each of the **waveguides** is greater than the area of its light output surface. In step (d), the photomask and photopolymerizable mixture which has not substantially polymerized by the substantially collimated actinic radiation during step (c) are removed from the substrate.

IT **64401-02-1**
(photopolymerizable compns. for tapered **waveguide** array production containing)

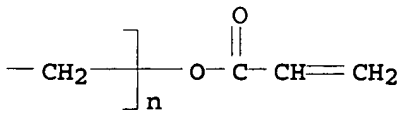
RN 64401-02-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



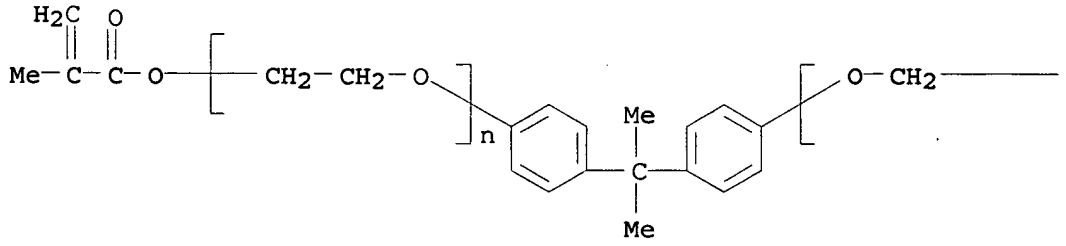
IC ICM G03F007-00
ICS G02B006-10

CC 74-4 (Radiation Chemistry, Photochemistry, and

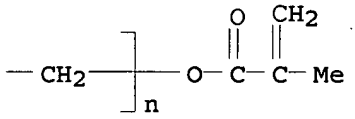
Photographic and Other Reprographic Processes)
Section cross-reference(s): 73
ST tapered photopolymd **waveguide** array
IT **Waveguides**
(process for manufacture of arrays of tapered photopolymd.)
IT Photoimaging compositions and processes
(photopolymerizable, for manufacture of arrays of tapered **waveguides**)
IT 80-62-6, Methyl methacrylate 103-11-7, 2-Ethylhexyl acrylate 141-32-2, Butyl acrylate 818-61-1, 2-Hydroxyethyl acrylate 999-61-1, 2-Hydroxypropyl acrylate 1070-70-8, 1,4-Butanediol diacrylate 1330-61-6, Isodecyl acrylate 2223-82-7, Neopentyl glycol diacrylate 2358-84-1, Diethylene glycol dimethacrylate 3066-71-5, Cyclohexyl acrylate 3524-68-3, Pentaerythritol triacrylate 4074-88-8, Diethylene glycol diacrylate 4986-89-4, Pentaerythritol tetraacrylate 13048-33-4, 1,6-Hexanediol diacrylate 15625-89-5, Trimethylolpropane triacrylate **64401-02-1**
(photopolymerizable compns. for tapered **waveguide** array production containing)
IT 119-61-9, Benzophenone, uses 947-19-3, 1-Hydroxycyclohexyl phenyl ketone 6175-45-7, α,α-Diethoxyacetophenone 24650-42-8, Benzildimethyl ketal 71868-10-5, 2-Methyl-1-[4-(methylthio)phenyl]-2-morpholino-1-propanone 106797-53-9 119313-12-1, 2-Benzyl-2-dimethylamino-1-(4-morpholinophenyl)-1-butanone 168547-51-1
(photopolymerizable compns. for tapered **waveguide** array production containing acrylates and)

L27 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:626260 HCAPLUS
DOCUMENT NUMBER: 123:212446
TITLE: Protection coatings for optical discs, aspherical lenses and optical **waveguides**
AUTHOR(S): Rot, Alfred; Zaks, Irene
CORPORATE SOURCE: R&D Center, DIPOL, Moscow, Russia
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (**1994**), 2253(Optical Interference Coatings, Pt. 2), 1091-7
CODEN: PSISDG; ISSN: 0277-786X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Photopolymerizable acrylic coatings are widely used in present day optical devices. However they usually failed on the inadequate optical parameters and low H2O resistance. A novel class of the photopolymerizable coatings from multifunctional carbonate methacrylates with unique combination of properties is described. Their applications range from optical disks to different kinds of lenses and gradient elements for optical **waveguides.**
IT **41637-38-1**
(protection coatings for optical disks, aspherical lenses and optical **waveguides**)
RN 41637-38-1 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-[(2-methyl-1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36

IT Acrylic polymers, properties
(carbonate methacrylates; protection coatings for optical disks, aspherical lenses and optical **waveguides**)

IT Optical instruments
(protection coatings for optical disks, aspherical lenses and optical **waveguides**)

IT Urethane polymers, properties
(acrylic, formulation with dipentaerythritolhexaacrylate and isobornylacrylate; protection coatings for optical disks, aspherical lenses and optical **waveguides**)

IT Polycarbonates, properties
(methacrylates, protection coatings for optical disks, aspherical lenses and optical **waveguides**)

IT **Waveguides**
(optical, protection coatings for optical disks, aspherical lenses and optical **waveguides**)

IT Memory devices
(optical disks, protection coatings for optical disks, aspherical lenses and optical **waveguides**)

IT Acrylic polymers, properties
(polyurethane-, formulation with dipentaerythritolhexaacrylate and isobornylacrylate; protection coatings for optical disks, aspherical lenses and optical **waveguides**,formulation with dipentaerythritolhexaacrylate and isobornylacrylate)

IT 79-10-7D, Acrylic acid, esters with hydroxyethyl carbonates 5888-33-5D, Isobornylacrylate, formulation with dipentaerythritolhexaacrylate and urethane acrylate 13048-33-4 29570-58-9D, Dipentaerythritolhexaacrylate, formulation with urethane acrylate and isobornylacrylate 38548-95-7D, bromine containing **41637-38-1**
(protection coatings for optical disks, aspherical lenses and optical **waveguides**)

L27 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:276759 HCAPLUS
DOCUMENT NUMBER: 122:67923

TITLE: Plastic **waveguides** and manufacture thereof
INVENTOR(S): Tsukamoto, Koji; Ishizuka, Takeshi
PATENT ASSIGNEE(S): Fujitsu Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06016720	A2	19940125	JP 1992-174379 <--	1992 0701

PRIORITY APPLN. INFO.: JP 1992-174379 <-- 1992 0701

AB The process comprises the steps of forming a UV-curable prepolymer film on a substrate; forming a **waveguide** stripe by exposing the film to UV through a photomask; and heat-treating both the exposed and the unexposed regions of the film; the prepolymer comprises a vinyl (co)polymer or a polysulfone containing ≥1 C-rings or heterocyclic groups, a fluoromonomer, and a photopolymn. initiator.

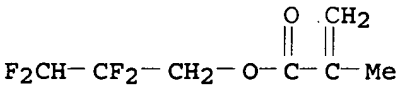
IT **160027-03-2 160219-61-4**
(manufacture of plastic **waveguides** using selective photopolymn.)

RN 160027-03-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2,2,3,3-tetrafluoropropyl ester, polymer with carbonic dichloride, dichloromethane, 4,4'-(1-methylethylidene)bis[phenol], 2,2,2-trifluoroethyl 2-methyl-2-propenoate, 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-methyl-2-propenoate and 2,2,2-trifluoro-1-(trifluoromethyl)ethyl 2-propenoate (9CI) (CA INDEX NAME)

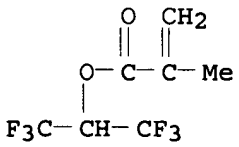
CM 1

CRN 45102-52-1
CMF C7 H8 F4 O2



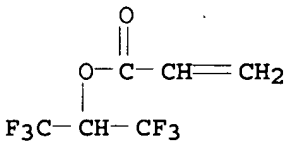
CM 2

CRN 3063-94-3
CMF C7 H6 F6 O2



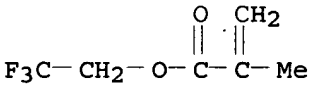
CM 3

CRN 2160-89-6
CMF C6 H4 F6 O2



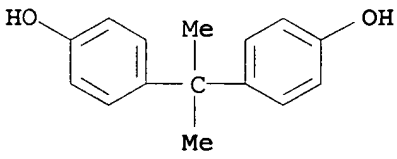
CM 4

CRN 352-87-4
CMF C6 H7 F3 O2



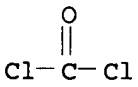
CM 5

CRN 80-05-7
CMF C15 H16 O2



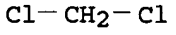
CM 6

CRN 75-44-5
CMF C Cl2 O



CM 7

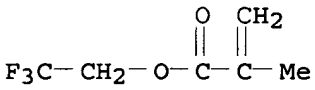
CRN 75-09-2
CMF C H2 Cl2



RN 160219-61-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2,2,2-trifluoroethyl ester, polymer with 4,4'-(1-methylethylidene)bis[phenol], 1,1'-sulfonylbis[4-chlorobenzene] and tetrahydrofuran (9CI) (CA INDEX NAME)

CM 1

CRN 352-87-4
CMF C6 H7 F3 O2

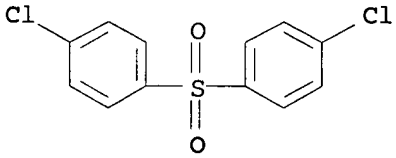


CM 2

CRN 109-99-9
CMF C4 H8 O

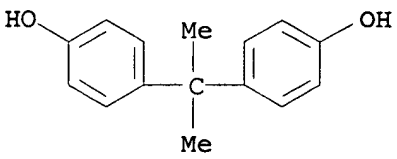
CM 3

CRN 80-07-9
CMF C12 H8 Cl2 O2 S



CM 4

CRN 80-05-7
CMF C15 H16 O2

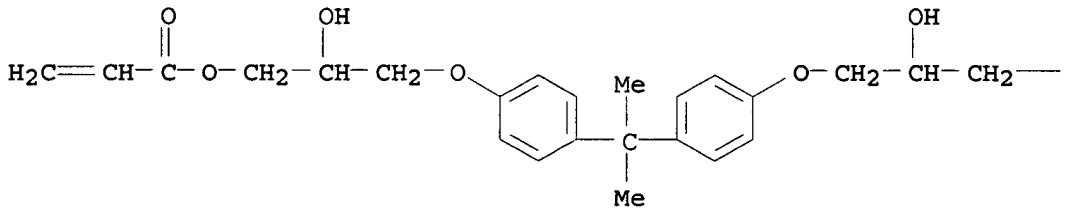


IC ICM C08F020-22
ICS C08F002-44; C08F002-50; G02B006-12; G03F007-004; G03F007-038
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
ST plastic optical **waveguide** photopolymn; vinyl polymer optical **waveguide**; polysulfone optical **waveguide**
IT Polysulfones, uses
(manufacture of plastic **waveguides** using selective photopolymn.)
IT **Waveguides**
(optical, manufacture of plastic **waveguides** using selective photopolymn.)
IT Polymerization
(photochem., manufacture of plastic **waveguides** using selective photopolymn.)
IT 160026-89-1 160026-90-4 160026-91-5 160026-92-6
160026-93-7 160026-94-8 160026-95-9 160026-96-0
160026-97-1D, polymers with vinyl-naphthalene derivs.
160026-98-2D, polymers with vinyl-naphthalene derivs.
160026-99-3D, polymers with vinyl-naphthalene derivs.
160027-00-9 160027-01-0 160027-02-1 **160027-03-2**
160219-60-3 **160219-61-4**
(manufacture of plastic **waveguides** using selective photopolymn.)

L27 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:57601 HCAPLUS
DOCUMENT NUMBER: 122:42125
TITLE: Optical channel **waveguides** based on photo-polymerizable di/tri acrylates
AUTHOR(S): Nakagawa, K.; Kowalewski, T.; Phelps, C. W.; Rode, D. L.; Krchnavek, R. R.
CORPORATE SOURCE: Department of Electrical Engineering, Washington University, St. Louis, MO, 63130-4899, USA
SOURCE: Proceedings of SPIE-The International Society for Optical Engineering (**1994**), 2153(Optoelectronic Interconnects II), 208-17
CODEN: PSISDG; ISSN: 0277-786X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Authors report on the use of di/tri acrylates in a photocurable polymer system for the fabrication of optical channel **waveguides.** The high degree of crosslinking in these materials improves the stability over linear systems. Authors formulated resin mixts. to fabricate both single-mode and multimode **waveguides** at dimensions comparable to optical fibers to improve fiber-to-**waveguide** coupling. Results on refractive index tailoring as well as DSC, DMA, processing resolution, and optical loss are presented.
IT **4687-94-9**, Ebecryl 600
(optical channel **waveguides** based on

photo-polymerizable di/tri acrylates)
RN 4687-94-9 HCAPLUS
CN 2-Propenoic acid, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



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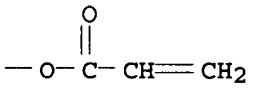

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 36, 37, **74**
ST optical channel **waveguide** polymer acrylate; polyacrylate polyurethane epoxy polymer **waveguide**; refractive index **waveguide**
IT **Waveguides**
(optical channel **waveguides** based on photo-polymerizable di/tri acrylates)
IT Acrylic polymers, uses
Urethane polymers, uses
(optical channel **waveguides** based on photo-polymerizable di/tri acrylates)
IT Epoxy resins, uses
(acrylic, optical channel **waveguides** based on photo-polymerizable di/tri acrylates)
IT Acrylic polymers, uses
(epoxy, optical channel **waveguides** based on photo-polymerizable di/tri acrylates)
IT 947-19-3, Irgacure 184 **4687-94-9**, Ebecryl 600
42978-66-5, Tripropylene glycol diacrylate 52408-84-1
125622-47-1, Ebecryl 4883
(optical channel **waveguides** based on photo-polymerizable di/tri acrylates)

L27 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1990:506455 HCAPLUS
DOCUMENT NUMBER: 113:106455
TITLE: Improved photosensitive resin compositions for fabrication of optical elements
INVENTOR(S): Arai, Yushi; Ikeda, Akihiko
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent

LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02062546	A2	19900302	JP 1988-213606	19880830

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PRIORITY APPLN. INFO.: JP 1988-213606 19880830

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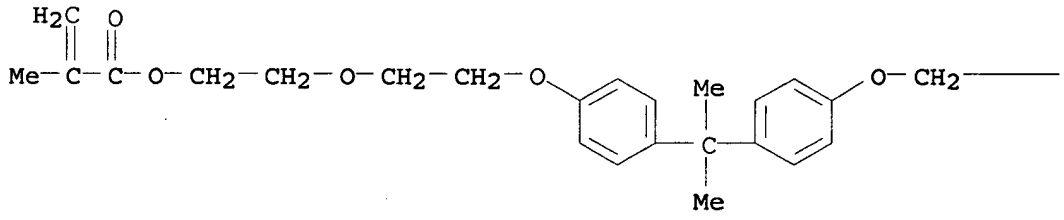
AB The title compns. consist of (a) linear polymers, (b) polyfunctional (meth)acrylates that give polymerized products with refractive index not different from that of the linear polymer by >0.015, in temperature range 0-80°, (c) (meth)acrylates H2:CR1COOR2 (R1 = H, Me; R2 = C≤10 aliphatic or cyclic alkyl, aryl, arylalkyl groups). These compns. provide low loss as optical **wave guide**, and are resistant to humidity. Thus, a solution containing PMMA 58, HX220M (bifunctional methacrylate) 21, and cyclohexyl methacrylate 21 parts, catalyst and MEK was applied on poly(vinylidene fluoride) film, dried, exposed with UV, developed with Cl3CMe, and rinsed with water to obtain a 140-μm-wide, 400-mm optical **wave guide**. Loss factor with 2 mW He-Ne laser was 1 at 0-40, 2 at 60, and 11 dB/m at 80°. After storage at 65°, 95% relative humidity for 1000 h, the loss factor was 4 at 0-40, 5 at 60, and 14 dB/m at 80°.

IT **56744-60-6**
(photoresists for optical **waveguide** fabrication containing)

RN 56744-60-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyloxy-2,1-ethanediyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A



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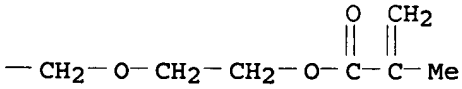

IC ICM G03F007-033

ICS C08F002-48
CC 74-5 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
Section cross-reference(s): 73
ST **waveguide** optical photoresist low loss; refraction index optical **waveguide** photoresist
IT **Waveguides**
(optical, photoresists for fabrication of, with low loss)
IT Resists
(photo-, for fabrication of optical **waveguides**, refraction index and, for low loss)
IT 101-43-9, Cyclohexyl methacrylate 109-16-0 2177-70-0, Phenyl methacrylate 2223-82-7 9011-14-7, PMMA 52366-89-9, Poly(4-methylcyclohexyl methacrylate) **56744-60-6** 74937-80-7 120763-30-6, Poly(1-methylcyclohexyl) methacrylate 128940-91-0
(photoresists for optical **waveguide** fabrication containing)

L27 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1989:644318 HCAPLUS
DOCUMENT NUMBER: 111:244318
TITLE: Optical **waveguide** made from tetrabromobisphenol-styrene copolymer
INVENTOR(S): Shimizu, Tadashi; Ikeda, Akihiko
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01136106	A2	19890529	JP 1987-293946	1987 1124
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PRIORITY APPLN. INFO.: JP 1987-293946 1987 1124
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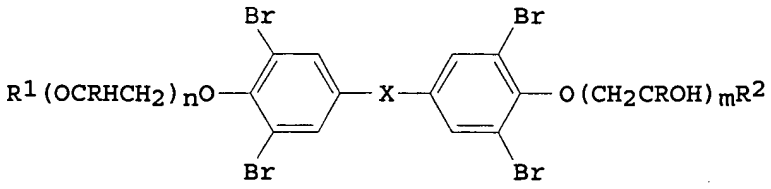
GI



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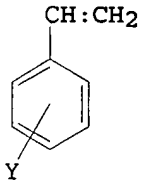


II

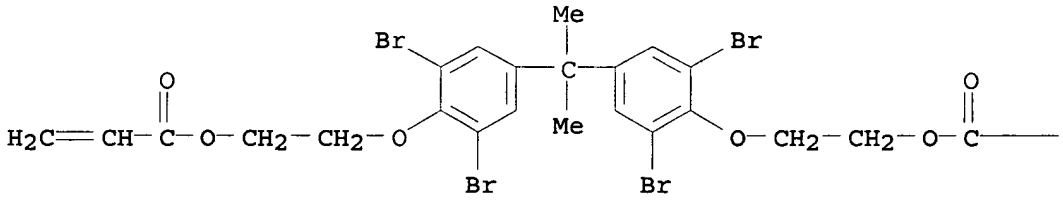
AB An organic optical **waveguide** is fabricated by forming a film of a photosensitive composition comprising I [X = CH2, C(CH3)2, CH:CH, O, SO2; R = H, Me; R1 = COCH:CH2, COCCCH3):CH2, H; R2 = COCH:CH2, COC(CH3):CH2; n + m = 0-4], II (Y = H, Me, CH:CH2, OMe, Cl), and a photoinitiator and patterning the film photolithog. The **waveguide** is suited for use as an optical splitter, coupler, etc.

IT **66710-97-2 67006-39-7 81517-40-0 122808-56-4 123614-89-1 123614-90-4 123614-91-5 123630-77-3**
(photosensitive compns. containing, for optical **waveguide** preparation)

RN 66710-97-2 HCAPLUS

CN 2-Propenoic acid, (1-methylethylidene)bis[(2,6-dibromo-4,1-phenylene)oxy-2,1-ethanediyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

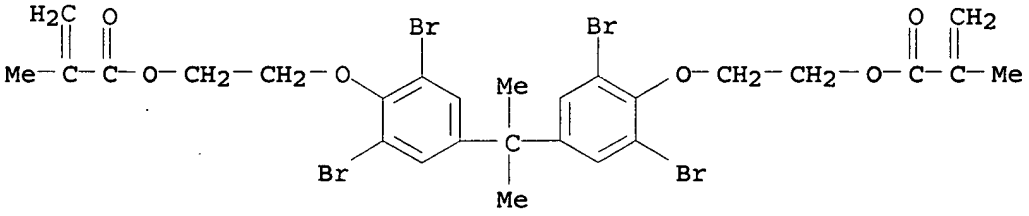


PAGE 1-B

— CH═ CH2

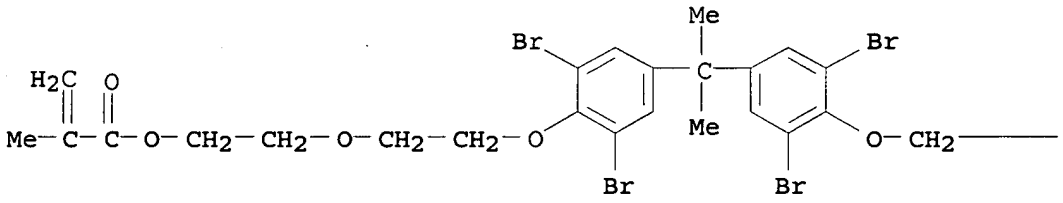
RN 67006-39-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[(2,6-dibromo-4,1-phenylene)oxy-2,1-ethanediyl] ester (9CI) (CA INDEX NAME)



RN 81517-40-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[(2,6-dibromo-4,1-phenylene)oxy-2,1-ethanediyloxy-2,1-ethanediyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



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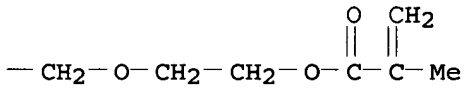
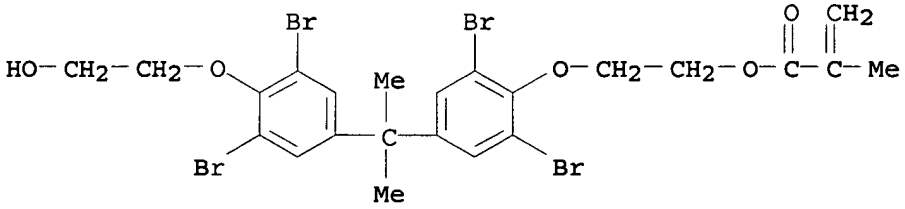
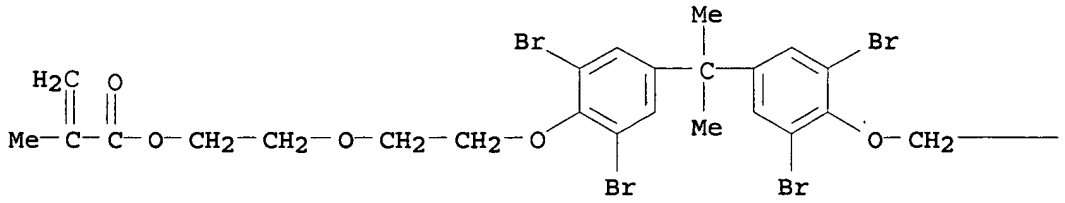


RN 122808-56-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[2,6-dibromo-4-[1-[3,5-dibromo-4-(2-hydroxyethoxy)phenyl]-1-methylethyl]phenoxy]ethyl ester (9CI) (CA INDEX NAME)



RN 123614-89-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[2-[2,6-dibromo-4-[1-[3,5-dibromo-4-[2-[(1-oxo-2-propenyl)oxy]ethoxy]phenyl]-1-methylethyl]phenoxy]ethoxy]ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



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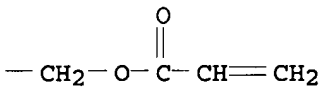
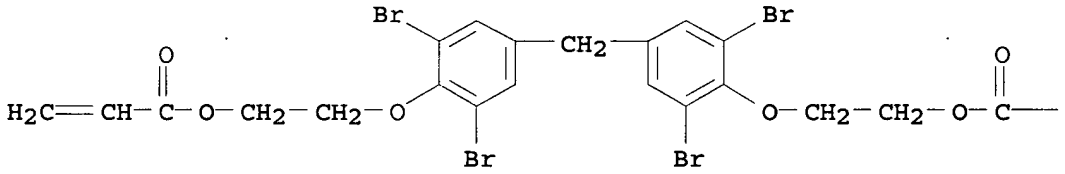
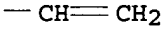


RN 123614-90-4 HCAPLUS
CN 2-Propenoic acid, methylenebis[(2,6-dibromo-4,1-phenylene)oxy-2,1-ethanediyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

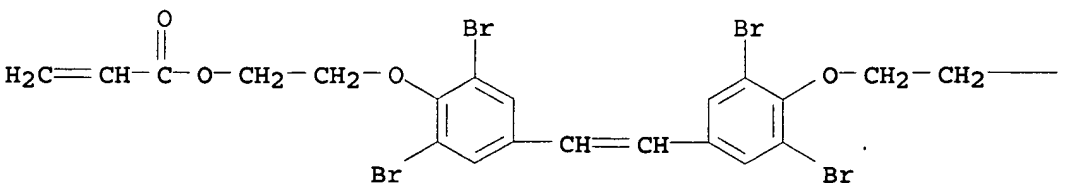


PAGE 1-B



RN 123614-91-5 HCAPLUS
CN 2-Propenoic acid, 1,2-ethenediylbis[(2,6-dibromo-4,1-phenylene)oxy-2,1-ethanediyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



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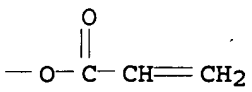
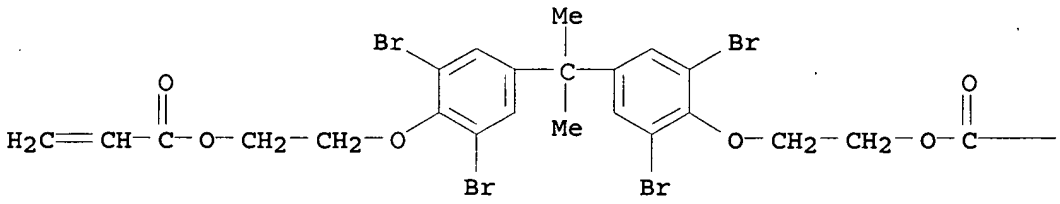


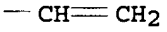
RN 123630-77-3 HCAPLUS
CN 2-Propenoic acid, (1-methylethylidene)bis[(2,6-dibromo-4,1-phenylene)oxy(methyl-2,1-ethanediyl)] ester (9CI) (CA INDEX NAME)

PAGE 1-A



2 (D1—Me)

PAGE 1-B



IC ICM G02B006-00
ICS C08F002-48; C08F212-08; C08F220-30; C08F299-00; G02B006-12; G03C001-68; G03C001-71
CC 74-4 (Radiation Chemistry, Photochemistry, and **Photographic** and Other Reprographic Processes)
ST optical **waveguide** tetrabromobisphenol styrene copolymer
IT Photoimaging compositions and processes
(styrene-tetrabromobisphenol for optical **waveguide** preparation)
IT **Waveguides**
(optical, styrene-tetrabromobisphenol copolymer, prepared by photopolymn.)
IT **66710-97-2 67006-39-7 81517-40-0**
107185-96-6 **122808-56-4 123614-89-1**
123614-90-4 123614-91-5 123630-77-3
(photosensitive compns. containing, for optical **waveguide** preparation)